Comments of the Attorneys General of New Mexico, California, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Washington, Vermont, and the District of Columbia

on

the Environmental Protection Agency's "Draft Revised Method for National Level Endangered Species Risk Assessment Process for Biological Evaluations of Pesticides;
Notice of Availability and Public Meeting,"
84 Fed. Reg. 22,120 (May 16, 2019)

August 15, 2019

INTRODUCTION

The undersigned State Attorneys General of New Mexico, California, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Washington, Vermont, and the District of Columbia ("the States") respectfully submit comments on the Environmental Protection Agency's ("EPA") recently proposed "Draft Revised Method for National Level Endangered Species Risk Assessment Process for Biological Evaluations of Pesticides" ("Draft Method"). The risk assessment process is designed to evaluate risks pesticides may pose to listed species, as required under the Endangered Species Act ("ESA"), but EPA's Draft Method, if adopted, would fail to do so.[1]

The Draft Method revises EPA's previous method for evaluating pesticide impacts on endangered species ("Established Method"). The Established Method was developed over several years, in concert with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service ("Services"), to incorporate a 2013 National Research Council report, "Assessing Risks to Endangered and Threatened Species from Pesticides."[2] The Established Method was published in 2015 after public notice and comment. EPA so far has used the Established Method to evaluate three pesticides: chlorpyrifos, diazinon and malathion.[3]

The Draft Method purports to incorporate public comments and "lessons learned" from the first three pesticide evaluations that revealed "major limitations" of the Established Method, while increasing efficiency and protecting endangered species "without being overly conservative."[4]

But EPA's Draft Method is antithetical to the plain language and purpose of the ESA. By curtailing data inputs, arbitrarily narrowing the scope of findings, and discounting results that are purportedly uncertain, the Draft Method would allow EPA, through its risk assessment, to arbitrarily determine that a proposed pesticide registration or reregistration is not likely to adversely affect listed plants and animals, or is not likely to adversely modify critical habitat, prior to and without consultation with the Services. Indeed, the Draft Method appears designed at each step to minimize the likelihood that further review of impacts to species will be required. Additionally, the Draft Method precludes any analysis of the effects of climate change on the habitat ranges of listed species, which is unrealistic and unreasonable in the present climate change scenario.

These ill-advised changes to the Established Method increase risks to threatened and endangered plants and animals. EPA's Draft Method is particularly troubling in light of the dire state of imperiled plants and animals worldwide. As the United Nation's Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Service Plenary recently reported, we are facing a global extinction crisis affecting a million species—more than in any other period in human

[1] 16 U.S.C. § 1531 *et seq*.

[2] National Research Council, *Assessing Risks to Endangered and Threatened Species from Pesticides* ("NAS Report") at 5, 6 The National Academies Press, Washington, D.C. (2013), https://doi.org/10.17226/18344.

[3] Copies of these biological evaluations can be found at https://www.epa.gov/endangered-species/implementing-nas-report-recommendations-ecological-risk-assessment-endangered-and

[4] 4 Fed. Reg. 22120, at 22121 (May 16, 2019).

history.[5] In addition to species' intrinsic value and the importance of biodiversity to ecosystem health, the U.N. report emphasizes the grave implications the extinction crisis poses to human health and wellbeing—impacts felt in our States and across the country. Indeed, the report emphasizes that pesticide effects on pollinating insects can devastate crops.[6]

For the reasons explained in detail below, the Draft Method violates the letter, legislative history, purpose and spirit of the ESA, is contrary to well-established case law interpreting the ESA, and lacks any reasoned or justifiable basis. Therefore the Draft Method is "arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law" in violation of the Administrative Procedure Act (APA),[7] and is "in excess of [EPA's] statutory jurisdiction, authority, or limitations, or short of statutory right."[8] Accordingly, the States encourage EPA to abandon the Draft Method, or at a minimum revisit several key aspects to strike a more precautionary approach to the protection of the nation's listed species that complies with the ESA.

BACKGROUND AND SUMMARY

Congress enacted the ESA nearly forty-five years ago in a bipartisan effort "to halt and reverse the trend toward species extinction, whatever the cost."[9] As President Nixon explained in signing the Act, "[n]othing is more priceless and more worthy of preservation than the rich array of animal life with which our country has been blessed."[10]

In our States, there are many species comprising this rich biological tapestry that are vulnerable to pesticides and require the protections that a properly administered ESA provides.

These include but are not limited to the following federally endangered and threatened species:

- Dwarf wedge mussel (*Alasmidonta heterodon*), found in Maryland, New York, New Jersey, Massachusetts, and Pennsylvania. The Fish and Wildlife Service states: "Pesticides, chlorine, excessive nutrients, and silt carried by agricultural runoff … present a threat to this species."[11]

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[5] *See* Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, *Advance Report of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on the work of its seventh session*, (May 4, 2019), https://www.ipbes.net/global-assessment-report-biodiversity-ecosystem-services.

[6] *See* Darryl Fears, *One million species face extinction, U.N. report says. And humans will suffer as a result*, Wash. Post (May 6, 2019).

[7] 5 U.S.C. § 706(2)(A)

[8] 5 U.S.C. § 706(2)(C)

[9] *Tennessee Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978); *see* 16 U.S.C. § 1531(a).

[10] President's Statement on Signing the Endangered Species Act of 1973, 374 Pub. Papers 1027, 1027-1028 (Dec. 28, 1973), https://quod.lib.umich.edu/p/ppotpus/4731942.1973.001/1081?page=root;rgn=full+text;size=100;view=image.

[11] USFWS, *Dwarf Wedge Mussel Recovery Plan*, (Feb. 8,1993), https://www.fws.gov/northeast/pafo/pdf/Dwarf%20wedgemussel%20Recovery%20Plan.pdf, at 15.

- Hay's Spring amphipod (*Stygobromus hayi*), a groundwater spring species, is found in Rock Creek Park, District of Columbia, and is the Capitol's only federally endangered species. The National Park Service identifies degradation of the subsurface groundwater from pesticides and other pollutants as a threat to this species and other amphipods.[12]

- Indiana bat (*Myotis sodalis*), a cave-dwelling bat whose population has been in continued decline since it was listed as endangered more than 50 years ago, is found in Maryland, New York, New Jersey, Pennsylvania, and Vermont. The Fish and Wildlife Service states that population declines may be due to pesticides and environmental contaminants.[13]

- Karner blue butterfly (*Lycaeides melissa samuelis*), found in New York. The Fish and Wildlife Service states that increased use of pesticides to control invasive species, if not designed to avoid or minimize harm to the Karner blue butterfly, could adversely affect butterfly populations.[14]

- Mountain yellow-legged frog (*Rana muscosa*), found in California. The Fish and Wildlife Service states: "Evidence of the effects of wind-borne pesticides deposited from upwind agricultural sources are suggested as a cause of measured sublethal effects to amphibians in the Sierra Nevada."[15]

- Puget Sound Chinook salmon (*Oncorhynchus tshawytscha*), occupies a range of approximately 10,600 square miles including in the Skagit and Snohomish watersheds of Washington State. The National Marine Fisheries Service recognizes degraded water quality from sediment, pesticide, herbicide, and fertilizer runoff as a threat to Puget Sound Chinook salmon recovery.[16]

- Rusty patched bumble bee (*Bombus affinis*), a pollinator that the Fish and Wildlife Service reports has declined by 87 percent in the last twenty years and is now likely present in only 0.1 percent of its historical range. Its current range includes

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[12] U.S. Department of the Interior, National Park Service. Rock Creek Park. *Final White-Tailed Deer Management Plan/ Environmental Impact Statement*. (Dec. 2011); *see also* U.S. Department of the Interior, National Park Service. *Final General Management Plan: Environmental Impact Statement. Rock Creek Park and the Rock Creek and Potomac Parkway*. (2005)

[13] USFWS, *Indiana Bat Five-Year Review: Summary and Evaluation* (Sept. 2009) https://www.fws.gov/midwest/endangered/recovery/pdf/INBA5Yr30Sept2009.pdf, at 20.

[14] USFWS, *Karner Blue Butterfly Five-year Review* (Sept. 2012) https://www.fws.gov/midwest/Endangered/insects/kbb/pdf/kbb5YrReviewSept2012.pdf, at 49.

[15] USFWS, *Mountain Yellow-Legged Frog- Southern California Distinct Population Segment 5-year Review* (July 13, 2012), https://ecos.fws.gov/docs/five_year_review/doc4001.pdf, at 51.

[16] Nat'l Marine Fisheries Serv., Northwest Region, *Final Supplement to the Shared Strategy's Puget Sound Salmon Recovery Plan*, at 23 (Nov. 17, 2006), https://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/puget_sound/chinook/ps-supplement.pdf

Massachusetts and Pennsylvania. The Fish and Wildlife Service has identified pesticides as one of four significant external stressors affecting this species' recovery.[17]

- San Joaquin kit fox (*Vulpes macrotis mutica*), found in California. The Fish and Wildlife Service states that pesticides, specifically rodenticides, pose a threat due to direct or secondary poisoning.[18]
- Silvery minnow (*Hybognathus amarus*), found in New Mexico. The Fish and Wildlife Service identifies pesticides as a threat to the species.[19]
- Southwestern willow flycatcher (*Empidonax traillii extimus*), found in New Mexico and California. The Fish and Wildife Service has identified pesticides as threats to the birds' prey species.[20]
- Stephens' kangaroo rat (*Dipodomys stephensi and D. cascus*), found in California. The Fish and Wildlife Service identifies rodenticides as a range-wide threat to this species.[21]
- Taylor's checkerspot butterfly (*Euphydryas editha taylori*), found in Washington and Oregon. The Fish and Wildlife Service "acknowledges the use of pesticides as harmful to Taylor's checkerspot butterfly at all life stages."[22]

The ESA enshrines a national policy of "institutionalized caution" in recognition of the "overriding need *to devote whatever effort and resources necessary* to avoid further diminution of national and worldwide wildlife resources."[23] That pervasive goal "is reflected not only in the stated policies of the Act, but in literally every section of the statute."[24] The primary purposes of the ESA are "to provide a means whereby the ecosystems upon which endangered species and

[17] https://www.fws.gov/midwest/Endangered/insects/rpbb/pdf/SSAReportRPBBwAdd.pdf, at 40.

[18] USFWS, *San Joaquin Kit Fox 5-Year Review: Summary and Evaluation* (Sept. 31, 1998), https://ecos.fws.gov/docs/five_year_review/doc3222.pdf, at 53.

[19] USFWS, *Designation of Critical Habitat for the Rio Grande Silvery Minnow; Final Rule* (Feb. 19, 2003), https://www.govinfo.gov/link/fr/68/8088?link-type=pdf.

[20] USFWS, *Designation of Critical Habitat for the Southwestern Willow Flycatcher* (June 3, 2013), https://www.govinfo.gov/link/fr/78/343?link-type=pdf

[21] Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to Remove the Stephens' Kangaroo Rat from the Federal List of Endangered and Threatened Wildlife, 75 Fed. Reg. 51204 at 51221 (August 19, 2010) (finding delisting not warranted).

[22] USFWS, *Designation of Critical Habitat for Taylor's Checkerspot Butterfly and Streaked Horned Lark; Final Rule* (Oct. 3, 2013)

[23] *Hill*, 437 U.S. at 177; *see also Babbitt v. Sweet Home Chapter of Cmtys.*, 515 U.S. 687, 698-99 (1995) (describing broad purposes of Act).

[24] *Hill*, 437 U.S. at 184.

threatened species depend may be conserved" and "a program for the conservation of" such species, and to ensure that all federal agencies utilize their authorities to further these purposes.[25]

The ESA achieves its salutary purposes through multiple vital programs. Most relevant here, section 7(a)(2) requires every federal agency to "insure" that its actions are not likely to jeopardize any listed species or destroy or adversely modify any designated critical habitat.[26] To effectuate this fundamental statutory duty, section 7(b) requires federal agencies to consult with the Services if all or any part of a proposed federal agency action "'may affect' any listed species or critical habitat."[27] The section 7 consultation process has been described as "[t]he heart of the ESA" and is critical to achieving the ESA's overarching conservation purposes.[28] The consultation requirement reflects "an explicit congressional decision to require agencies to afford first priority to the declared national policy of saving endangered species," thereby elevating concern for species protection "over the 'primary missions' of federal agencies."[29]

EPA's decision to register a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act[30] ("FIFRA") is a federal agency action subject to section 7 consultation under the ESA. Initially, EPA evaluates potential risks that a pesticide poses to listed species and critical habitat in a biological evaluation (BE). The BE determines whether the pesticide's registration will have "no effect" on the species or habitat, or "may effect" the species or habitat. A "no effect" finding ceases the inquiry under the ESA, while a determination that a pesticide's registration "may effect" a listed species or critical habitat triggers some form of consultation with the Services.

The Draft Method describes a two-step approach to be conducted in a BE used by EPA to determine whether a proposed pesticide registration or reregistration is likely to adversely affect plants or animals listed and protected under the ESA, and thereby trigger the section 7 consultation process. If EPA determines at Step 1 that a pesticide's use "may affect" a species, the agency must seek concurrence from the Services in Step 2 in determining whether the use is "likely to adversely affect" that species. If so, Step 3 requires EPA to consult formally with the Services in drafting a Biological Opinion to determine whether the pesticide would jeopardize the continued existence or adversely modify or destroy the critical habitat of any ESA-listed species. At each of these successive steps, a negative determination precludes further review.

EPA's Draft Method runs counter to the ESA and its policy of institutionalized caution and is arbitrary and capricious for multiple reasons.

- First, the Draft Method unlawfully redefines the threshold term "may affect," requiring, for the first time, that effects be reasonably certain to occur to trigger further inquiry and consultation with the Services.

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[25] 16 U.S.C. § 1531(b), (c)(1).

[26] 16 U.S.C. § 1536(a)(2).

[27] *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 495 (9th Cir. 2011).

[28] *Id*.

[29] *Hill*, 437 U.S. at 185; *see also* 16 U.S.C. §§ 1531(b)-(c), 1532(3), 1536(a)(1) (directing all federal agencies to conserve endangered and threatened species and to utilize their authorities in furtherance of Act's species-protective purposes).

[30] 7 U.S.C. § 136 *et seq*.

- Second, the Draft Method unlawfully circumvents consultation with the Services by allowing EPA, without the Services' concurrence or consultation, to evaluate whether a species would be *adversely* affected at the outset of the process, rather than simply whether the species would be *in any way* affected as has long been required.
- Third, the Draft Method would exclude from the biological evaluation process species on the brink of extinction, in direct contravention of the ESA's fundamental purpose to prevent species from going extinct.
- Fourth, the Draft Method would unlawfully curtail evaluation of effects on species whose range overlaps fully with federal lands without assessing whether the species would actually be sufficiently protected by other means.
- Fifth, the Draft Method would arbitrarily discount exposure to a pesticide where less than one percent of a species' range overlaps with a pesticide's potential use sites without any assessment whether that one percent area is important to a species' survival and without regard to potential migration due to climate change or other causes.
- Sixth, the Draft Method would unlawfully allow EPA to rely on incomplete and unreliable crop and past usage data in predicting future use even though there are wide data gaps in each of EPA's selected sources, past usage is not necessarily indicative of future usage, and, in some cases, more comprehensive data are available.
- Seventh, the Draft Method unreasonably restricts the area of pesticide drift that EPA would consider in assessing effects to a species.
- Eighth, the Draft Method should, but fails to, resolve data ambiguities in favor of species protection.
- Finally, and relatedly, the Draft Method uses the term "conservative" in an inconsistent and contradictory fashion, but should instead hew to a species-protective approach consistent with the ESA's precautionary approach.

As it is written, the Draft Method appears designed at each step to minimize the likelihood that further review or consultation will be required—by curtailing data inputs, arbitrarily narrowing the scope of inquiry, and discounting results that are purportedly uncertain. This apparent focus on ruling out adverse impacts prior to consultation with the Services is antithetical to the plain language and purpose of the ESA. The undersigned States encourage EPA to abandon this ill-conceived approach, as it is contrary to the law and upends the consensus- and science-based methodology previously developed in concert with the Services and the National Academy of Sciences. At a minimum, EPA must revisit several key points in its Draft Method in order to strike a more precautionary and balanced approach that adheres to the purpose and the letter of the ESA: the protection of the nation's threatened and endangered species.

DETAILED COMMENTS

I. THE DRAFT METHOD UNLAWFULLY PRECLUDES AGENCY CONSULTATIONS REQUIRED BY THE ESA

The Draft Method appears designed to enable EPA to make more "no effect" determinations at Step 1 of the evaluation process to eliminate any consultation—formal or informal—with the Services. This design runs counter to the ESA, in which Congress sought to ensure that listed species received the full engagement of all federal agencies involved in protecting them.[31]

A. The Draft Method Unlawfully Redefines the Threshold Term "May Affect"

EPA's Draft Method undermines the pesticide evaluation process by unlawfully and arbitrarily inflating the threshold effect required to trigger interagency consultation. In particular, the Draft Method states:

> The BE determines whether the pesticide's registration will have 'no effect' on the species or designated critical habitat or 'may affect' the species or designated critical habitat. The Services regulations provide that the consultation obligation is triggered when an agency action 'may affect' one or more listed species or designated critical habitat. *May affect is not a defined term, but the Services have provided guidance suggesting it is any effect on a listed species that is reasonably certain to occur.*

(emphasis added).[32]

But the referenced guidance pertains to the section 10 incidental take permit analysis, a separate inquiry inapplicable here because it addresses "whether a project is likely to result in a 'take' of a listed species" to determine whether an incidental take permit is required under section 10 of the ESA,[33] not whether a federal agency action "may affect" a species and therefore triggers consultation under section 7 of the ESA.[34]

The Services have long defined "may affect" under section 7 as "the appropriate conclusion when a proposed action may pose **<u>any</u>** effects on listed species or designated critical habitat.

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[31] *See* 16 U.S.C. § 1531(b), (c)(1); 16 U.S.C. § 1536(a)(2); *Hill*, 437 U.S. at 177, 194.

[32] Draft Method at 2. The guidance that the Draft Method is apparently referencing is an April 26, 2018 letter from the Principal Deputy Director of the U.S. Fish and Wildlife Service to the Regional Directors 1-8, with the subject "Guidance on trigger for an incidental take permit under section 10(a)(1)(B) of the ESA where occupied habitat or potentially occupied habitat is being modified." *See* https://www.fws.gov/endangered/esa-library/pdf/Guidance-on-When-to-Seek-an-Incidental-Take-Permit.pdf ("Deputy Director Letter"); *see also* USFWS, *Habitat Conservation Plan Handbook* Chapter 3 (Dec. 6, 2018), https://www.fws.gov/endangered/what-we-do/hcp_handbook-chapters.html at 3-2; 50 C.F.R. §§ 402.12(a), (b), (k) (also referencing the "reasonably certain to occur" threshold with respect to permitting incidental take).

[33] Deputy Director Letter at 1.

[34] 16 U.S.C. § 1536; 50 C.F.R. § 402.14 (describing the formal consultation process).

When the Federal agency proposing the action determines that a 'may affect' situation exists, they must either initiate formal consultation or seek written concurrence from the Services[.]"[35] Contrary to EPA's suggestion in the Draft Method, the Services have long recognized and applied a low threshold for triggering consultation.[36, 37]

Courts also have recognized that the "may affect" determination sets a low bar for agency consultation. As the Ninth Circuit has explained, section 7(a)(2) is "[t]he heart of the ESA,"[38] requiring federal agencies to "insure" that their actions are not likely to jeopardize listed species or result in the destruction or adverse modification of their critical habitat.[39] Section 7 thus requires action agencies to consult with the Services if any part of a proposed action "may affect any listed species or critical habitat."[40] The "may affect" trigger for consultation is a "relatively low threshold[,]" allowing an agency to "avoid the consultation requirement only if it determines that its action will have 'no effect' on a listed species or critical habitat."[41] "[*A*]*ctions that have any chance of affecting listed species or critical habitat—even if it is later determined that the actions are "not likely" to do so—require at least some consultation under the ESA*."[42]

EPA's proposed characterization of the term "may affect" as requiring reasonable certainty is a dramatic departure from the ESA's core purpose, the language and intent of section 7, the Services' consistent prior interpretations of the term, and applicable case law. The authority and

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[35] Endangered Species Consultation Handbook, *Procedures for Conducting Consultation and Conference Activities under Section 7 of the Endangered Species Act* at xvi (Mar. 1998) https://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf (emphasis in original).

[36] *See* Interagency Cooperation—Endangered Species Act of 1973, as amended, 51 Fed. Reg. 19,926, 19,949 (June 3, 1986) ("Any possible effect, whether beneficial, benign, adverse or of an undetermined character, triggers the formal consultation requirement[.]").

[37] The Fish and Wildlife Service's very recent final rule addressing ESA section 7 consultation requirements states, "when the site-specific information is known, and it is determined the project 'may affect' a listed species or critical habitat, typically a subsequent consultation is completed." Endangered and Threatened Wildlife and Plants; Revision of Regulations for Interagency Cooperation (Aug. 12, 2019), 50 C.F.R. § 402. The new final rule does not define "may affect." It does seek to redefine "effects of the action" that are subject to section 7 consultation to include only effects that are reasonably certain to occur. However, the legality of this rule is doubtful. Section 7 requires that "each federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action" will not jeopardize the continued existence of any listed species or destroy or adversely modify its critical habitat, and further requires that consultation occur if any federal action may affect a listed species or designated critical habitat. 16 U.S.C. § 1536(a)(2), (b)(3)(A), (c)(1). The consultation requirement is mandatory and is not contingent on the "reasonable certainty" of an event occurring.

[38] *W. Watersheds Project*, 632 F.3d at 495.

[39] 16 U.S.C. § 1536(a)(2); *W. Watersheds Project*, 632 F.3d at 495.

[40] *W. Watersheds Project*, 632 F.3d at 495.

[41] *Karuk Tribe of Cal. v. U.S. Forest Serv.*, 681 F.3d 1006, 1027 (9th Cir. 2012).

[42] *Id.* (emphasis added); *see also Nat. Res. Def. Council v. Houston*, 146 F.3d 1118, 1125 (9th Cir. 1998) ("If an agency determines that its proposed action 'may affect' an endangered or threatened species, the agency must formally consult with the relevant Service.").

expertise for determining whether actions may impact threatened and endangered species lies with the Services.[43] By limiting the determination of impacts to listed species to situations that are "reasonably certain to occur" and neglecting to obtain the Services' concurrence in this determination, EPA would impermissibly exercise authority that belongs with the Services.[44] Further, where an agency changes position, it must demonstrate that the departure "is permissible under the statute, that there are good reasons for it, and that the agency *believes* it to be better, which the conscious change of course adequately indicates."[45] But EPA has failed even to recognize that it is adopting a new standard, let alone articulate a rational basis for the change. EPA's re-interpretation of the term "may affect" epitomizes arbitrary and capricious action.[46] The Draft Method's novel and unlawful interpretation of the term should be abandoned.

B. The Draft Method Unlawfully Short Circuits the Consultation Process by Evaluating Adversity to the Species in the Threshold Step 1

The Draft Method also unlawfully allows EPA to circumvent consultation by evaluating the likelihood of adverse effect—a Step 2 determination requiring concurrence by the Services—and considering jeopardy to the species—a Step 3 consultation issue reserved for the Services—at EPA's threshold "may affect" determination in Step 1. The Draft Method states, "Toxicity data used in the Step 1 and 2 analyses will be based on apical endpoints (i.e., survival, growth or reproduction) or other sublethal effects that can be quantitatively linked to apical endpoints."[47] Apical effects are more appropriately considered at Step 2, when determining if any individual may be adversely affected, and Step 3, when addressing the population-level consequences of actions and whether jeopardy is likely to occur.[48] They are not appropriate to apply, especially in a winnowing fashion, at Step 1 where the relevant inquiry is simply whether an action "ha[s] any chance of affecting listed species or critical habitat."[49] Moreover, evaluating a pesticide's adverse effects on a listed species is, under existing law and regulations, a task for the Services through concurrence or consultation.[50] Therefore, EPA should not limit its toxicity evaluations at

[43] *See* 16 U.S.C. § 742a; 50 C.F.R. §§ 402.12(k)(1), 402.13(c), 402.14(b)(1) (requiring Service concurrence in federal action agency's "not likely to adversely affect" determination); 402.14(g)-(h) (identifying Service responsibilities during formal consultation and contents of Service biological opinions).

[44] *Id.* and 16 U.S.C. §§ 1536(b)(3) and (c)(1).

[45] *Fed. Commc'ns Comm'n v. Fox Television Stations*, 556 U.S. 502, 515 (2009).

[46] *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("[A]gency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'" (citation omitted)).

[47] Draft Method at 12.

[48] *See* Draft Method at 4; NAS Report at 5, 6.

[49] *Karuk Tribe*, 681 F.3d at 1027

[50] *See* 16 U.S.C. §§ 1536(a)(2), (b)(3); 50 C.F.R. § 402.14(g)(4) (requiring the FWS to "[f]ormulate [its] opinion as to whether the action … is likely to jeopardize the continued existence of listed species or

Step 1 to those effects linked with apical endpoints, and should in fact wait to analyze scientifically-indicated apical endpoints in consultation with the Services in Steps 2 and 3.

C. Excluding Species "Most Likely Extinct" from Protection Contradicts the Most Fundamental Purpose of the ESA

EPA's proposal to exclude from evaluation species that are "most likely extinct" is unlawful and plainly violates the ESA. It bears repeating that Congress enacted the ESA "to halt and reverse the trend toward species extinction, whatever the cost."[51] Thus, in *National Wildlife Federation*, the Ninth Circuit explained that "an agency may not take action that will tip a species from a state of precarious survival into a state of likely extinction. … [E]ven where baseline conditions already jeopardize a species, the agency may not take action that deepens the jeopardy by causing additional harm."[52]

It is antithetical to the ESA to preclude evaluation and consultation with the Services for a species on the brink of extinction where pesticide exposure could kill off the last remaining individuals that are perhaps too scarce to be counted. EPA should abandon this ill-conceived, unlawful exception to the ESA's clear requirement to evaluate pesticide effects for all listed species.

D. The Draft Method Improperly Precludes the Further Evaluation of a Pesticide's Impact on a Species Whose Range Overlaps Completely with Federal Lands

EPA's proposal to eliminate from all further evaluation any species whose "range overlaps completely (≥99%) with federal lands,"[53] is arbitrary, unreasonable, and fails to ensure conservation of listed species. EPA seeks to forego species evaluations on federal lands partly because "appropriate protections *may* already be in place,"[54] and partly because it wishes to "rely on the local expertise of the federal agencies applying pesticides to their lands to avoid adversely affecting listed species."[55] But EPA never explains how it would determine whether existing protections are *actually* in place or how the "local expertise" of other federal agencies or pesticide applicators entitles or qualifies those entities to evaluate the biological effects of pesticides on listed species. This proposed limitation unlawfully defies the ESA's mandate that

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result in the destruction or adverse modification of critical habitat."); *see also* 50 C.F.R. §§ 402.12(k)(1), 402.13(c), 402.14(b)(1).

[51] *Hill*, 437 U.S. at 184; 16 U.S.C. §§ 1531, 1536(a)(1).

[52] *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv*, 524 F.3d 917, 930 (9th Cir. 2008); *accord Am. Rivers v. Fed. Energy Regulatory Comm'n*, 895 F.3d 32, 47 (D.C. Cir. 2018) ("where baseline conditions already jeopardize a species, an agency may not take action that deepens the jeopardy" (quoting with approval *Nat'l Wildlife Fed'n*, 524 F.3d at 930); biological opinion's "jeopardy analysis is arbitrary [if] it fails to account for the effects of degraded conditions" on the species).

[53] Draft Method at 17-18.

[54] *Id.* at 17 (emphasis added).

[55] *Id.* at 18.

all federal agencies must conserve listed species and utilize their authority to further the ESA's species-protective purposes, and it violates EPA's duties to ensure no jeopardy and no adverse modification of critical habitat.[56] EPA has statutory duties in this process, as described below, that it may not arbitrarily delegate to other entities. Nor may it legally ignore the impacts of pesticide use on huge areas of land where the pesticides will be applied. Even if it could do so legally, EPA has not provided a reasonable or justifiable explanation for this exclusion.

Contrary to EPA's assertion, eliminating consultation where a species occurs entirely on federal lands will only make the process less efficient and hamstring jeopardy findings. First and foremost, the Services and federal land managers will lack key information related to toxicity—well within EPA's purview—that is necessary to determine the pesticide's effect on a listed species. The Services and land managers do not share EPA's expertise concerning the toxicity of pesticides.[57] Even for proposed pesticide uses on federal lands, EPA should develop the record regarding toxicity and then, if necessary, utilize that record in consulting with the Services.[58] Once the Services have the toxicity information that represents EPA's expertise, the Services may then apply their own expertise—ensuring conservation of and no jeopardy to listed species, and no adverse modification of critical habitat.[59]

EPA's proposal to ignore endangered species evaluations on federal lands also fails to acknowledge that such species may depend on other species, including prey species, that may be affected by pesticide use outside the boundaries of federal ownership. For example, the black-footed ferret has lost significant range due to the use of rodenticides to destroy populations of its prey, including prairie dogs, outside of federal lands.[60] If the only population of black-footed

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[56] 16 U.S.C. §§ 1531(b)-(c), 1532(3), 1536(a)(1), (a)(2).

[57] *See* 16 U.S.C. § 742d-1 (tasking EPA with "comprehensive continuing studies on the effects of insecticides, herbicides, fungicides and pesticides, upon the fish and wildlife resources of the United States, for the purpose of determining the amounts, percentages, and formulations of such chemicals that are lethal to or injurious to fish and wildlife and the amounts, percentages, mixtures, or formulations that can be used safely, and thereby prevent losses of fish and wildlife from such spraying, dusting, or other treatment.").

[58] *See* 16 U.S.C. §§ 1531(b)-(c), 1532(3) (directing all federal agencies to conserve endangered and threatened species and to utilize their authorities in furtherance of Act's species-protective purposes); 50 C.F.R. § 402.14 ("The Federal agency requesting formal consultation shall provide the Service with the best scientific and commercial data available or which can be obtained during the consultation for an adequate review of the effects that an action may have upon listed species or critical habitat."); *Hill*, 437 U.S. at 185 ("Agencies in particular are directed by §§ 2(c) and 3(2) of the [ESA] to 'use . . . *all methods* and procedures which are necessary' to preserve endangered species. … In addition, the legislative history undergirding § 7 reveals an explicit congressional decision to require agencies to afford first priority to the declared national policy of saving endangered species.") (emphasis in original) (citing 16 U.S.C. §§ 1531(c), 1533(3)).

[59] *See* 16 U.S.C. 742(a) (declaring a congressional priority to conserve fish and wildlife); 16 U.S.C. 742(b) (establishing the Fish and Wildlife Service for that purpose); 16 U.S.C. § 1536(b).

[60] *See* U.S. Fish & Wildlife Serv., *Black-footed Ferret Recovery Plan* at 5-8 (1988), https://www.fws.gov/montanafieldoffice/Endangered_Species/Recovery_and_Mgmt_Plans/Black-footed_Ferret_Recovery_Plan.pdf.

ferrets is on federal land, and a rodenticide is approved for prairie dog extermination outside of the federal lands, that pesticide usage may affect the viability of the federal land ferret population by reducing the connectivity of prairie dog populations within the metapopulation necessary to sustain that prey source in the long term. This possible outcome represents the type of "may affect" determination that should be evaluated further in consultation with the Services, not categorically eliminated at Step 1.

Overall, because the Draft Method improperly delegates to other federal agencies duties that EPA itself must exercise—and eliminates or reduces the extent of the impacts required to be analyzed under section 7—the Draft Method violates EPA's duty to prevent jeopardy and adverse modification of critical habitat under section 7(a)(2) and its duty to conserve under section 7(a)(1).[61]

II. THE DRAFT METHOD'S ANALYTICAL APPROACHES WOULD UNDERESTIMATE PESTICIDE EFFECTS AND ARE INCONSISTENT WITH THE ESA

Under the ESA and applicable case law, federal "agency actions" subject to section 7 consultation must be defined as broadly as possible.[62] This broad view of "agency action" effectuates the ESA's overriding policy of institutionalized caution because "caution can only be exercised if the agency takes a look at all the possible ramifications[.]"[63]

The scope of the agency action is critical to ensuring that the full suite of direct, indirect, and cumulative impacts of the action on listed species and habitat are evaluated during the section 7 consultation process in order to effectuate federal agencies' and the Services' fundamental section 7 duties. Once the agency action is defined, the Services must evaluate the effects of all aspects of that action, including short-term and long-term effects, and site-specific and cumulative effects, when combined with the adverse effects on the species and habitat that are already included as part of the environmental baseline.[64]

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[61] *See Nat'l Wildlife Fed'n*, 524 F.3d at 933 (describing a similar "analytical sleight of hand" wherein the NMFS was "manipulating the variables to achieve a 'no jeopardy' finding").

[62] 50 C.F.R. § 402.02; *Karuk Tribe*, 681 F.3d at 1020 ("There is 'little doubt' that Congress intended agency action to have a broad definition in the ESA, and we have followed the Supreme Court's lead by interpreting the plain language in conformance with Congress' clear intent." (citing *Pac. Rivers Council v. Thomas*, 30 F.3d 1050, 1054–55 (9th Cir.1994)); *see also Conner v. Burford*, 848 F.2d 1441,1453 (9th Cir. 1988) ("[T]he scope of the agency action is crucial because the ESA requires the biological opinion to analyze the effect of the *entire* agency action"); *see also Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 522 (9th Cir. 2010) ("[t]he delineation of the scope of an action can have a determinative effect on the ability of a biological opinion fully to describe the impact of the action on the species").

[63] *Wild Fish Conservancy*, 628 F.3d at 521 (quoting *Conner*, 848 F.2d at 1453.

[64] *See* 50 C.F.R. § 402.14; *Nat'l Wildlife Fed'n*, 524 F.3d at 928-30, 934-35, *Wild Fish Conservancy*, 628 F.3d at 522-24; *Turtle Island Restoration Network v. U.S. Dep't of Commerce*, 878 F.3d 725, 737-38 (9th Cir. 2017); *Pac. Coast Fed'n of Fishermen's Assn. v. Natl. Marine Fisheries Serv.*, 265 F.3d 1028, 1036-38 (9th Cir. 2001); *Pac. Coast Fed'n of Fishermen's Assn. v. U.S. Bureau of Reclamation*, 426 F.3d 1082, 1090-95 (9th Cir. 2005); *Miccosukee Tribe of Fla. v. United States*, 566 F.3d 1257, 1270 (11th Cir. 2009).

A. Discounting a One Percent Overlap in Species' Ranges with Potential Use Sites Is Arbitrary and Capricious, and Unlawfully and Unreasonably Limits the Scope of Biological Evaluations

The Draft Method arbitrarily seeks to discount overlap of less than one percent between a listed species' range and potential pesticide use sites as unreliable and not representative of real exposure potential,[65] equating a finding of less than one percent overlap to a finding of "no effect" at Step 1 and precluding further analysis. But equating a small overlap with a no effect finding simply fails to consider a number of important potential effects and factors. And it is clearly inconsistent with caselaw stating that a "may affect" determination is necessary if actions "have any chance of affecting listed species or critical habitat."[66]

An agency's decision is arbitrary and capricious "if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise."[67] EPA's proposed exception in cases of one percent overlap fails to assess numerous important potential effects on a species, including, for example, whether that one percent range is geographically or biologically significant to a species or where species may move into potential use sites in the future.

1. For Some Species, One Percent of Their Ranges Are Geographically and Biologically Significant

EPA supports this change with the reasoning that data become imprecise at lower levels of overlap.[68] But EPA has acted arbitrarily and capriciously by entirely failing to consider variability in the geographical extent of species' ranges and their distribution within those ranges. The critical habitat of the endangered southwestern willow flycatcher, for example, includes 1,227 stream miles within California, Arizona, Nevada, Utah, Colorado, and New Mexico, encompassing a total area of approximately 208,973 acres.[69] One percent of that habitat area is 2,089 acres or just over 12 stream miles,[70] a screening threshold that would exclude four stream reaches out of eight in New Mexico that are known habitat for the birds.[71]

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[65] *See* Draft Method at 6, 11, 16.

[66] *Karuk Tribe*, 681 F.3d at 1027.

[67] *Motor Vehicle Mfrs*, 463 U.S. at 43

[68] Draft Method at 16.

[69] Designation of Critical Habitat for Southwestern Willow Flycatcher, 78 Fed. Reg. 344 (Jan. 3, 2013) (codified at 50 C.F.R. pt. 17).

[70] *See* 78 Fed. Reg at 503-534

[71] 78 Fed. Reg. at 528, 529, 533

Similarly, the range of Washington's Puget Sound Chinook salmon is approximately 10,600 square miles.[72] Under the Draft Method, EPA's one percent screening threshold would result in a determination of no effect for pesticide applications covering 106 square miles or less—even if the application area encompassed habitat important to Puget Sound Chinook reproduction and survival. Such a result is arbitrary and irrationally ignores the potentially harmful consequences to Puget Sound Chinook salmon and other listed anadromous fish species with extensive ranges, as well as the marine mammals that rely on them.

EPA's Draft Method would therefore have a demonstrable impact on species like these. In such circumstances, the one percent cutoff is arbitrary and unsupported by EPA's reasoning. In addition, this "one size fits all" approach fails to consider species-specific facts. For example, some species are more imperiled and/or are more susceptible to toxins and are thus more likely to be adversely affected by pesticide use in even a small percentage of their ranges.

Additionally, arbitrarily defaulting to a "no effect" finding based solely on a threshold consideration of less than one percent overlap would mean that EPA will never reach the question whether there are indirect or cumulative effects of pesticide usage on species' habitats, despite EPA's stated intention to consider indirect effects.[73] Considering indirect and cumulative effects of an agency action is part and parcel of the required comprehensive look at the effects of a proposed federal agency action required by section 7 of the ESA.[74]

Finally, a one percent cutoff would ignore geographically small but still biologically significant portions of species' ranges. Endangered aquatic waterfowl (e.g., stellar's eider or short tailed albatross) can occupy extremely large ranges but still congregate in small portions of those ranges for important life history events like breeding and feeding young. The same is true for amphibian species, such as the listed California tiger salamander and the listed California red-legged frog, which congregate at vernal pools for breeding but disperse into uplands or other water sources, respectively, the rest of the year. The vernal pools may not be designated critical habitat, but they may still be essential to the species' long-term survival. Such realities cannot be arbitrarily dismissed at Step 1 as they would be under EPA's proposed one percent cutoff.

EPA has "entirely failed to consider" these "important aspect[s] of the problem" or provide any reasoned explanation for its proposed, changed methodology for examining pesticide impacts, contrary to the ESA and APA.[75]

2. The Draft Method Would Allow EPA and the Services To Ignore Future Species Migration into New Areas Due to Climate Change

While the above concerns rely on static habitat boundaries, a changing climate is invalidating expectations of such stability. Climate change is already affecting many species' ranges, and

[72] Comment Letter from Wash. Dep't of Fish and Wildlife Dir. Kelly Susewind to EPA Adm'r Andrew Wheeler, at 2 (June 17, 2019).

[73] *See* Draft Method at 6-7, 8.

[74] *See National Wildlife Fed'n*, 524 F.3d at 928-30, 934-35.

[75] *Motor Vehicle Mfrs,* 463 U.S. at 43.

those species' changing migration patterns may result in significantly greater overlap in the foreseeable future between species ranges and pesticide use areas. Indeed, we are already seeing unprecedented migration of plant and animal species to new areas as a result of climate change.[76] As the Services recently explained, "[a]s the effects of global climate change continue to influence distribution and migration patterns of species, the ability to designate areas that a species has not historically occupied is expected to become increasingly important" to ensure connectivity between habitats and protect movement corridors and emerging habitat for species experiencing range shifts.[77] The Draft Method arbitrarily ignores this important consideration.[78] By discounting as unreliable an overlap of less than one percent between species' current ranges and areas of potential pesticide exposure, EPA could altogether ignore unoccupied areas that could provide important habitat in a changing climate and thereby avoid addressing the effects of climate change in determining whether pesticide uses would jeopardize species' continued existence or adversely modify or destroy designated critical habitat.

B. Reliance on Cropland Data Layer Data, NASS Survey Data, and Usage Data To Define "Action Area" Is Inconsistent with the True Meaning of "May Affect" and Would Unlawfully and Unreasonably Constrain Pesticide Biological Evaluations

Even if it were appropriate to base a "no effect" determination on a "less than one percent overlap" analysis—and it is not—the Draft Method's reliance on Cropland Data Layer ("CDL") information, survey data on where crops are grown, and usage data on where pesticides are used, will result in inaccurate "less than one percent overlap" determinations and consequently inaccurate "no effect" determinations.

EPA states that it will determine "potential use sites" based on the CDL, and then eliminate sites as "potential use sites" if either (1) the NASS Census of Agriculture or (2) usage data from public and proprietary sources, as reflected in the Summary Use and Usage Memo ("SUUM"),

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[76] *See* Céline Bellard, *et al*., *Impacts of Climate Change on the Future of Biodiversity*, *supra* note 30, at 367 Ecology Letters (2012) ("[R]ange shifts have . . . been observed [for] more than 1,000 species[.]"); Robert A. Robinson, *et al*., *Travelling Through a Warming World: Climate Change and Migratory Species*, 7 Endangered Species Research 87, 95 (2009) (migrating species are responding to climate change by altering their ranges and "it will be important to protect areas that may be used in the future," at the edge or beyond current ranges); Thomas T. Moore, *Climate Change and Animal Migration,* 41 Envtl. L. 393, 405 (2011) (climate change may cause migration corridors and destinations to shift out of protected areas).

[77] Listing Endangered and Threatened Species and Designating Critical Habitat; Implementing Changes to the Regulations for Designating Critical Habitat, 81 Fed. Reg. 7414-01, 7,435 (Feb. 11, 2016) (codified at 50 C.F.R. Part 424); *see also* Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Three Plant Species on Hawaii Island, 83 Fed. Reg. 42,362, 42,365 (Aug. 21, 2018) (designating unoccupied critical habitat for three plant species to allow for expansion of the species' range and the reintroduction of individuals into areas where the species historically occurred, and to provide areas for recovery); *cf. Conservation Council for Hawai'i v Babbitt*, 2 F. Supp. 2d 1280, 1288.

[78] *See Motor Vehicle Mfrs*., 463 U.S. at 43.

indicate that a given crop is not actually grown in a "potential use site."[79] It appears that EPA will first assume that the CDL data show the universe of possible usage sites, and then will reduce the number of sites based on first the NASS Census data and then the SUUM data.

At each stage, this analysis has the potential to inaccurately minimize the extent of the "action area" subject to analysis under section 7—and consequently the one percent "overlap area" discussed above—leading to an inaccurate "no effect" determination if the data sources are not completely reliable, current, and predictive. Not one of the data sources EPA proposes to use is completely reliable, current, and predictive.

1. With Respect to Crop Locations, CDL Data Are Not Always Reliable, and NASS Data Are at Best Incomplete

Recent research out of North Dakota has warned that CDL data are vulnerable to false negatives—i.e., crops reported as absent from a site when in fact they are grown there. [80] This means that based on CDL data, EPA could inaccurately limit the size of "action areas," leading to inaccurate overlap analyses and inaccurate "no effect" determinations. The Oregon Department of Agriculture has reported that the quality of CDL data varies with the types of crops grown, and that the data accuracy drops significantly, up to 60 percent, for minor crops such as tree fruit, berries, other row crops, vineyards and orchards, and vegetables and ground fruit. Thus, CDL data are especially unreliable in "small crop" states such as Oregon."[81]

EPA indicates that after narrowing the scope of "action areas" based on CDL data, it will review NASS survey data on "crops grown" and further narrow the scope of "action areas" if the NASS survey data indicate a crop is not grown where CDL data suggested it is. This review will not fix the problems with CDL data because EPA apparently will use the NASS data only to reduce, not expand, "crops grown" areas identified by CDL data. And it could exacerbate the problem, given that surveys notoriously garner poor response rates. So if the only people who respond to a survey in X area say they are not growing Y crop, but people in X area who ARE growing Y crop simply don't respond to the survey, EPA could inaccurately conclude that Y crop is not grown in X area and accordingly, and inaccurately, narrow the scope of the "action areas," again leading to inaccurate overlap analyses.

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[79] Draft Method at 10.

[80] Reitsma *et al.*, *Does the U.S. Cropland Data Layer Provide an Accurate Benchmark for Land-Use Change Estimates*? Agronomy Journal (2016), https://dl.sciencesocieties.org/publications/aj/abstracts/108/1/266.

[81] *See* USDA 2017, Oregon Cropland Data Layer (Jan. 26, 2018), https://www.nass.usda.gov/Research_and_Science/Cropland/metadata/meta.php; USDA 2018, Oregon Cropland Data Layer (Feb. 15, 2019), https://www.nass.usda.gov/Research_and_Science/Cropland/metadata/meta.php, (in 2018, producer accuracy for apples was listed at 53.8 percent; for grapes, 44 percent; for walnuts, 8 percent).

2. Admitted Data Gaps Render Reliance on Usage Data Unreasonable

EPA proposes to use usage data to screen out pesticide application sites in Step 1. In particular, the Draft Method states, "[i]n this approach, areas that have either not grown any of the labeled crop uses *or that have not reported usage for any of the currently labeled uses* are not considered to meet the standard that the effect of the action is reasonably expected to occur in those areas."[82] EPA provides no reasoned basis for this position, and the States believe that there can be none.

As already noted, ESA requires a broad look at myriad actions that may affect threatened and endangered species. As the Ninth Circuit has explained, courts "interpret the term 'agency action' broadly, because 'caution can only be exercised if the agency takes a look at all the possible ramifications[.]'"[83] EPA's proposed usage data approach fails to assess potential future use directly relevant to the "may effect" vs. "no effect" determination triggering section 7 consultation, for several reasons.

First, as EPA admits, there are significant reporting gaps in usage data.[84] Usage data do not always exist, particularly for non-commercial users, so the fact that there is not *reported* past usage cannot be a basis to conclude that usage did not occur. As one of many examples, some states with otherwise extensive usage data do not quantify pesticides applied via seed coatings, which are widely implicated in deleterious effects on pollinators.[85, 86] Secondly, the approach inappropriately assumes that the only places pesticides *will* be used are places where they *have been* used. There is no rational basis for EPA to assume that past pesticide usage patterns and rates will remain static and will reflect the full scope of future use, and on that basis refuse to consider the actual full range of reasonably foreseeable future uses. Such a methodology would likely inaccurately exclude consideration of the impacts of pesticide uses on listed species and critical habitat from biological evaluations, and thus also from interagency consultation.

The result—an unaddressed risk of direct and indirect exposures of threatened and endangered species to harmful and/or lethal pesticides—would risk EPA's approval of pesticides that would harm listed species and critical habitat, in direct violation of the ESA.[87]

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[82] Draft Method at 10.

[83] *Wild Fish Conservancy*, 628 F.3d at 521 (quoting *Conner*, 848 F.2d at 1453).

[84] Draft Method at 10, 20, 22.

[85] *See* Maarten Bijleveld van Lexmond *et al.*, *Worldwide integrated Assessment on systemic pesticides: Global collapse of the entomofauna: exploring the role of systemic insecticides*, 22 Envtl. Sci. Pollution Res. 2-3 (2015).

[86] EPA's registration review of neonicotinoid pesticides has completely failed to address the risk to pollinators, including listed species, posed by the dust-off of treated seeds during the planting process. *See* EPA, Office of Chemical Safety and Pollution Prevention, *Preliminary Bee Risk Assessment to Support the Registration Review of Clothianidin and Thiamethoxam*, at 347, 348, 365, No. EPA-HQ-OPP-2011-0865 (Jan. 5, 2017).

[87] *See* 16 U.S.C. § 1531(c)(1), 1536(a)(1), (a)(2)); *Hill*, 437 U.S. at 194.

With regard to SUUM data, as EPA acknowledges, the SUUM pesticide usage data are based in large part on "proprietary sources (Agriculture Market Research Data)."[88] This is inconsistent with the recommendations of the NAS Report: "To be considered authoritative, geospatial data on any scale need to meet three criteria: availability from a widely recognized and respected source, public availability, and inclusion of metadata."[89]

EPA should use all available sources to evaluate where pesticides may be applied and therefore "may affect" endangered species. This means not screening out potential pesticide use sites based on data that are incomplete, unreliable, or unavailable to the public.

3. Exclusive Reliance on Five Years of Past Usage Data, Without Predictions of Future Use, Unlawfully and Unreasonably Restricts the Scope of Biological Evaluations

The Draft Method states that EPA's method for forecasting pesticide use "relies upon the most recent usage data (generally the last 5 years of available data) and uses those data to make regulatory decisions. The most recent 5 years of data are … considered representative of current labeled uses."[90]

Given that EPA acknowledges significant gaps in that dataset, relying solely on the most recent five years of usage data may unreasonably narrow the scope of biological evaluations and exclude potential effects of pesticides on listed species and critical habitat. Additionally, as discussed, the ESA's mandate to take a broad view of potential agency actions requires that some measure of likely future use of pesticides should be included in the analysis.[91]

Finally, restricting data to the previous five years of pesticide use is likely to unreasonably constrain biological evaluations, given that some staple crops are grown in diverse crop rotation timescales approaching five years;[92] longer timescales would more cautiously capture actual past and likely future use of pesticides and be in better keeping with the ESA's inherently cautious approach.[93] Moreover, failing to consider all past and potential future uses of pesticides over the entire fifteen-year period of registration is inconsistent with the ESA. Because FIFRA

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[88] Draft Method at 10.

[89] NAS Report at 10, n.2.

[90] Draft Method at 10.

[91] *See Conner*, 848 F.2d at 1453 ("[T]he scope of the agency action is crucial because the ESA requires the biological opinion to analyze the effect of the *entire* agency action."); *see also Wild Fish Conservancy*, 628 F.3d at 522 ("[t]he delineation of the scope of an action can have a determinative effect on the ability of a biological opinion fully to describe the impact of the action on the species").

[92] *See* U.S. Dep't of Agric., *A Complete, Step-by-Step Rotation Planning Guide, Appendix 3: Sources of Inoculum for Crop Diseases in the Northeastern United States*, https://www.sare.org/Learning-Center/Books/Crop-Rotation-on-Organic-Farms/Text-Version/APPENDIX-3-Sources-of-Inoculum-for-Crop-Diseases-in-the-Northeastern-United-States.

[93] *Hill*, 437 U.S. at 194 ("Congress has spoken in the plainest of words, making it abundantly clear that the balance has been struck in favor of affording endangered species the highest of priorities, thereby adopting a policy which it described as 'institutionalized caution.'")

evaluations occur every fifteen years, and because registration for fifteen years is the proposed action to be evaluated, EPA should, at a minimum, utilize the entire interim period of past usage data as well as future potential uses.[94]

C. Limiting Consideration of Pesticide Drift Is Arbitrary and Capricious and Unlawfully and Unreasonably Limits the Scope of Biological Evaluations

EPA's proposal to limit consideration of pesticide drift is likewise arbitrary and capricious. Specifically, the Draft Method limits consideration of pesticide drift to within 792 meters (2,600 feet) of a treated field and pesticide runoff in water within 30 meters (98 feet) of a site.[95] EPA based the 2,600-foot limit on the aerial limit of AgDRIFT, an empirical model based on 1990s deposition studies,[96] stating that "deposition beyond the limits of the models can occur under extreme circumstances [but] AgDRIFT … is a regression of interpolated values and going outside the bounds of that interpolation is uncertain." EPA's discounting of AgDRIFT's uncertainty beyond 2,600 feet is improper at the "may affect" stage because any potential effect, some uncertainty notwithstanding, triggers required consultation with the Services.[97]

Additionally, such a low, arbitrary, and uniform numerical value fails to account for pesticides that are both mobile and persistent in the environment. For example, EPA has previously determined that diazinon poses threats to aquatic organisms because of these characteristics.[98]

Finally, any fixed limit to consideration of pesticide drift is unreasonable because it would automatically discount potential indirect and cumulative effects of pesticides on listed species, despite EPA's assurance that such indirect effects should preclude a "no effect" finding at Step 1.[99] For example, non-listed insect or animal pollinators of plants may visit treatment or drift areas and be harmed or killed, rendering those species unavailable to provide pollination services to an endangered or threatened plant more than 2,600 feet or 98 feet distant from the pesticide. Such a scenario constitutes indirect harm to the listed plant, but will be unaddressed given arbitrary 2,600-foot and 98-foot limits. All potential indirect and cumulative effects should be considered by EPA at Steps 1 and 2.[100] For all of these reasons, EPA should remove its unsupported, unsupportable, and arbitrary numerical limit on evaluation of pesticide drift.

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[94] However, as discussed above, past usage data cannot be relied upon exclusively to predict likely future use of pesticides, and evaluate the impacts of that future use on listed species.

[95] Draft Method at 11.

[96] *Id.*

[97] *See Karuk Tribe*, 681 F.3d at 1027 ("An agency may avoid the consultation requirement only if it determines that its action will have 'no effect' on a listed species or critical habitat.").

[98] EPA, Office of Pesticide Programs, *Reregistration Eligibility Decision for Diazinon* at 23-24, 30, 33 (July 31, 2006), https://www3.epa.gov/pesticides/chem_search/reg_actions/reregistration/red_PC-057801_31-Jul-06.pdf.

[99] *See* Draft Method at 18.

[100] *See* NAS Report at 11 ("EPA in Step 2 … should conduct a broad search to identify sublethal effects of pesticides").

D. Data Ambiguities and Uncertainties Should Be Weighed in Favor of, Rather than Against, Species Protection

The Draft Method proposes to handle data gaps inconsistently. Where EPA faces gaps in data or uncertainty, the agency must adopt a species-protective approach.[101]

The Endangered Species Consultation Handbook states:

> Where significant data gaps exist there are two options: (1) if the action agency concurs, extend the due date of the biological opinion until sufficient information is developed for a more complete analysis, or (2) develop the biological opinion with the available information *giving the benefit of the doubt to the species*.")[102]

The Handbook thus appropriately recognizes that, under the ESA, uncertainty must always be resolved in a manner that is most protective to listed species.

Unlike the Handbook, EPA's Draft Method does not consistently follow a precautionary approach. To be sure, in several places, the Draft Method adopts a protective approach to uncertainties that comports with the Handbook. For example, EPA states that, in the face of uncertainty involved with toxicity data for broad taxonomic groups, it is "relying on toxicity data from the more sensitive species within each taxonomic group to help ensure we are being protective of each listed species."[103] The undersigned States urge EPA to maintain that approach.

In other contexts, however, the Draft Method fails to clarify whether such uncertainties should be resolved for or against the protection of listed species.[104] In at least one clear instance, the Draft

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[101] *See* 16 U.S.C. §§ 1531(b), (c)(1) (primary purposes of the ESA are "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved" and "a program for the conservation of" such species, and to ensure that all federal agencies utilize their authorities to further these purposes); *Hill*, 437 U.S. at 194 ("Congress has spoken in the plainest of words, making it abundantly clear that the balance has been struck in favor of affording endangered species the highest of priorities, thereby adopting a policy which it described as 'institutionalized caution.'"); *see also Sweet Home Chapter of Cmtys.*, 515 U.S. at 698-99 (describing broad purposes of Act).

[102] Endangered Species Consultation Handbook at 1-7 (emphasis added).

[103] Draft Method at 29; *see also id.* at 35 ("[W]hile any direct overlap of a use site with the range could be anywhere in the catchment, the assumption is conservatively made that the water body is directly next to the use site.").

[104] *See* Draft Method at 28 ("[T]here may be uncertainty in the exposure values being used for a particular species based on what potential uses it may overlap with, what type of habitat it is found in, or what the main potential exposure route(s) might be. Although the uncertainties associated with these factors cannot be quantitatively assessed at this time, they should be considered qualitatively in the effects determination."); *id.* at 32 ("Depending upon the number of uncertainties and the ranges specified for them, the simulation may require thousands or tens of thousands of recalculations to fully describe the variability associated with an analysis."); *id.* at 16 ("The lack of an accuracy assessment introduces uncertainty related to reporting accuracy of a spatial analysis, which should be based on the lowest level of accuracy among the datasets used."); *id.* at 23-24 ("As a species proceeds through step 2, refinements to the broad assumptions are made in order to more clearly understand the species-specific risk picture

Method appears to suggest that such uncertainties should be used to discount potential effects of pesticides on listed species.[105]

Where the Draft Method proposes to resolve uncertainties against species and habitat protection, it is arbitrary and capricious and violates the ESA and the APA. Given that the ESA mandates active conservation, any and all ambiguities should be interpreted so as to advance the conservation of listed species.

E. EPA's Vague, Inconsistent, and Inaccurate Characterization of the Draft Method's "Conservative" Approach Is Arbitrary and Capricious

Although EPA repeatedly describes the Draft Method's approach as "conservative," this characterization is ambiguously, inconsistently, and inaccurately applied. The Draft Method should clearly define what constitutes a "conservative approach" in this context, i.e. having the purpose of conserving listed species and their habitats. It should also remove as misleading any reference to "conservative" as describing approaches that would have the purpose or effect of reducing protections for listed species, or would otherwise be inconsistent with the ESA's protective approach to listed species.[106]

In several instances, EPA claims it will adopt "conservative" methods without explaining what the term means.[107] Elsewhere, the Draft Method uses the term "conservative" in a way that could be termed "inclusive" or "protective."[108] In at least one clear instance, the Draft Method adopts a less protective approach than the Established Method because the latter was "overly conservative."[109] This inconsistent use of language is confusing and misleading, and EPA's choices of language in the Draft Method, if it is adopted, would have real, on-the-ground consequences for species.

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and uncertainties associated with the available data and assessment. This is intended to decrease uncertainty in the effects determinations[.]").

[105] *See* Draft Method at 29 (reducing estimates of pesticide drift into forest habitats because "AgDRIFT would be expected to overestimate drift exposure to species that dwell in the interior of forest").

[106] *See Hill*, 437 U.S. at 177.

[107] *See* Draft Method at 13 ("if the population size is not known, a conservative estimate of the population will be made"); *id.* at 6 ("[Step 1] uses conservative assumptions and is intended to screen out species that are not reasonably expected to be exposed and are, therefore, not of concern for the assessed pesticide."); *id.* at 8 ("conservative exposure assumptions"); *id.* at 16 ("conservative assumptions related to the Action Area and drift").

[108] *See id.* at 14 ("more conservative thresholds" described as those that would "decrease the chance of failing to detect an effect that may be present"); *id.* at 35 ("the assumption is conservatively made that the water body is directly next to the use site"); *id.* at 36 ("[f]or obligate relationships, more conservative assumptions are made").

[109] *See id.* at 12 (criticizing an approach in the Established Method for overestimating potential pesticide exposure, claiming "the tool was considered … overly conservative" in that it "assumed that, as the concentrated mass of pesticide moved down the stream, there was no dissipation or dispersion of the concentration").

EPA should amend its Draft Method to use the term consistently and avoid ambiguity. Further, in substance, the purpose of the ESA,[110] as well as the principle of "institutionalized caution" enshrined in the ESA and recognized by the Supreme Court,[111] require EPA to always err on the side of inclusive, protective assumptions and broad definitions of the scope of the federal agency action and its potential effects. In the Step 1analysis, this obligation is particularly acute because EPA's role is to acknowledge "[a]ny possible effect, whether beneficial, benign, adverse, or of an undetermined character," of pesticides on endangered species.[112]

III. IF ADOPTED, THE DRAFT METHOD WOULD CONSTITUTE A FINAL AGENCY ACTION SUBJECT TO THE APA AND JUDICIAL REVIEW

Agency action is final and reviewable where the action marks the consummation of the agency's decision-making process and where the action is one by which "rights or obligations have been determined" or from which "legal consequences will flow."[113] "The core question is whether the agency has completed its decision-making process, and whether the result of that process is one that will directly affect the parties."[114]

EPA's Draft Method, if adopted, would mark the consummation of the agency's decision-making process for its methods for evaluating the effects of pesticides on endangered and threatened species and critical habitat with respect to pesticide registrations and reregistrations, and, by dictating the methods employed for assessing such risk, would have clear legal consequences for the regulated community, the States, and listed species throughout the nation. As EPA states in the Draft Method, the Draft Method "is intended to describe methods that *will generally be used in the evaluation* of potential risks from pesticides to listed species."[115] EPA's caveats about flexibility notwithstanding, the Draft Method, when finalized, will be used to make decisions about threatened and endangered species living in our respective States. As such, the Draft Method is a final agency action that will directly affect the regulated community and our States' commonly held interests in threatened and endangered species.

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[110] 16 U.S.C. §§ 1531(b), (c)(1) (the primary purposes of the ESA are "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved" and "a program for the conservation of" such species, and to ensure that all federal agencies utilize their authorities in furtherance of these purposes)

[111] *Hill*, 437 U.S. at 177, 194; *see also Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or*., 515 U.S. 687, 698-99 (1995) (describing broad purposes of Act).

[112] *See* Interagency Cooperation—Endangered Species Act of 1973, as amended, 51 Fed.Reg. 19,926, 19,949 (June 3, 1986).

[113] *Bennett v. Spear*, 520 U.S. 154, 177-78 (1997).

[114] *Franklin v. Massachusetts*, 505 U.S. 788, 797 (1992).

[115] Draft Method at 2-3; *see also id.* at 3 ("These methods *are intended to be used by EPA for making effects determinations under registration review, which will also be used to inform biological opinions* from the Fish and Wildlife Service and the National Marine Fisheries Service.").

CONCLUSION

EPA has failed to demonstrate that the Draft Method marks any improvement over the Established Method that was adopted after significant scientific and public analysis. Instead, the Draft Method is a "solution" in search of a "problem" that EPA has failed to demonstrate exists. The Draft Method would demonstrably weaken existing species protections—in violation of EPA's and the Services' ESA mandates—and would create vulnerabilities and uncertainties for species protection. EPA's Draft Method should be abandoned, and any future modifications to the Established Method that may be proposed must, at a minimum, honor the ESA's clear directives: that federal agencies handle our nation's listed species with an abundance of "institutionalized caution" and strive, no matter the cost, to ensure those species' preservation and recovery.

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