Case Nos. 17-70810, 17-70817
(REDACTED)
UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

NATIONAL FAMILY FARM COALITION, et al.,
Petitioners,
v.
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al.,
Respondents,
DOW AGROSCIENCES LLC,
Respondent-Intervenor.

NATURAL RESOURCES DEFENSE COUNCIL, INC.,
Petitioners,
v.
ANDREW K. WHEELER, et al.,
Respondents,
DOW AGROSCIENCES LLC,
Respondent-Intervenor.

On Petition for Review from the
United States Environmental Protection Agency

(REDACTED)
PETITIONERS NATIONAL FAMILY FARM COALITION, ET AL.'S REPLY BRIEF

CENTER FOR FOOD SAFETY
George A. Kimbrell
917 SW Oak Street, Suite 300
Portland, OR 97205
T: (971) 271-7372 / F: (971) 271-7374

EARTHJUSTICE
Paul H. Achitoff
850 Richards Street, Suite 400
Honolulu, HI 96813
T: (808) 599-2436 / F: (808) 521-6841

Counsel for Petitioners National Family Farm Coalition, et al.

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INTRODUCTION

EPA's approval of Dow's Enlist Duo threatens hundreds of endangered species and exposes thousands of farmers to significant harm. EPA flouted the Endangered Species Act's (ESA's) crucial procedural mandates, unlawfully arrogating the right to determine when consultation is required. The agency also violated the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), failing to support its decision with substantial evidence. The Court should vacate the registration.

ARGUMENT

I. THE COURT HAS JURISDICTION

Petitioners previously rebutted Dow's timeliness arguments, which Dow rehashes. ECF 27-1 (NFFC Petitioners); 25-1 (Petitioner NRDC). Dow's notion of an "explicit" date of entry for appellate review under 40 C.F.R. § 23.6 contradicts the regulation's plain language, this Court's prior reading, and common sense. *See id.*; *Powell's Books, Inc. v. Kroger*, 622 F.3d 1202, 1209 n.8 (9th Cir. 2010) ("Because the statute does not define 'explicit,' … we refer to its ordinary, dictionary meaning—that is, as 'fully revealed or expressed without vagueness, implication, or ambiguity'"). EPA agrees with Petitioners. ECF 24 at ¶¶ 4-7. NFFC

Petitioners incorporate their prior arguments here and join Petitioner NRDC's reply on this issue.[1]

II. NFFC PETITIONERS HAVE STANDING.

Dow challenges NFFC Petitioners' standing and again is wrong.[2] Petitioners have (1) suffered injury (2) traceable to EPA's challenged conduct that is (3) redressable. *Friends of the Earth v. Laidlaw Envtl. Servs.*, 528 U.S. 167, 180-81 (2000); *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992). *See* ECF 64-1 at 2. An organization has representational standing when "the interests at stake are germane to the organization's purpose," the claim and relief requested do not require "the participation of individual members in the lawsuit," and one of the organization's members could otherwise establish standing on her own behalf. *Laidlaw*, 528 U.S. at 181. This matter is central to Petitioners' missions,[3] and

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[1] Dow also renews its argument that three Petitioners are not proper for venue and instead a multi-district lottery should be triggered. Petitioners' opposition is incorporated here. ECF 26-1. In short, Dow's argument, that any petitioners from outside this Circuit joined in an otherwise-valid petition for review must be dismissed, lacks any basis in statute, rule, or judicial precedent.

[2] Unlike the petition's timeliness, the standing challenges are specific to the respective Petitioners.

[3] A107-131, A149-155, A174-178. Copies of further standing declarations are attached in the Reply Addendum of Declarations.

neither the relief nor claims require individual members as parties. Dow only challenges Petitioners' showing for their members' standing. ECF 111 at 17-18.

First, Dow gets the standard wrong. When procedural violations are at issue—such as failure to consult under the ESA—for cognizable injury-in-fact, plaintiffs must show "(1) the [defendants] violated certain procedural rules; (2) these rules protect [plaintiffs'] concrete interests; and (3) it is reasonably probable that the challenged action will threaten their concrete interests." *Citizens for Better Forestry v. U.S. Dep't of Agric.*, 341 F.3d 961, 969-70 (9th Cir. 2003). EPA violated the ESA's procedures, which protect Petitioners' interests in ESA-protected species, and it is reasonably probable EPA's approval will threaten those concrete interests.

Although Dow attempts to raise the bar, Petitioners need not show *actual* harm, only the "increased risk of harm" resulting from EPA's actions and omissions. *Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 860 (9th Cir. 2005) ("[T]o require actual evidence of environmental harm, rather than an increased risk based on a violation of [a] statute, misunderstands the nature of environmental harm and would unduly limit the enforcement of statutory environmental protections.") (internal quotation marks omitted). This is particularly true here, where Dow improperly elevates the standing bar above that

required for the merits: that Enlist Duo "may affect" endangered species, not that it *will* affect or *has* affected them. *Laidlaw*, 528 U.S. at 181 (courts should not "raise the standing hurdle higher than the necessary showing for success on the merits in an action").

This is a classic *Laidlaw* situation: Petitioners' declarations detail injuries to their interests in ESA-protected species where the declarants recreate, which EPA's registration threatens. Nothing more is required. *Cottonwood Envtl. Law Ctr. v. U.S. Forest Serv*, 789 F.3d 1075, 1081 (9th Cir. 2015), *cert. denied*, 137 S.Ct. 293 (2016).[4]

Second, Dow's claims that NFFC Petitioners' ESA concerns are generalized are demonstrably false. For example, CFS member Martha Crouch, Ph.D. (A100-106), an Indiana resident who passionately follows endangered whooping cranes, regularly views them at specific locations in Texas as well as near her home.

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[4] Dow's reliance on *Summers v. Earth Island Institute*, 555 U.S. 488 (2009) is misplaced for the reasons this Court explained in *Cottonwood*, 789 F.3d at 1080-81. NFFC Petitioners' members' declarations establish a geographic nexus between their interests and the locations suffering environmental impacts by asserting EPA's failure to consult will cause injuries in specific locations. *Id.* at 1081; *Nuclear Info. & Res. Serv. v. Nuclear Regulatory Comm'n*, 457 F.3d 941, 952 (9th Cir. 2006) ("We have defined the geographic nexus requirement broadly to permit challenges to actions with wide-reaching geographic effects where the petitioners properly allege, and support with affidavits, that they use the impacted area, even if the impacted area is vast.").

A102-104. She knows the cranes' flyway passes over agricultural fields in many states where Enlist Duo is approved, and that the cranes feed in sprayed fields, where they will now ingest Enlist Duo residues. A104-105. EPA itself admitted: "[I]t is reasonable to conclude that the crane may be exposed to 2,4-D chlorine residues in prey on crop fields." ER667; *see also* A132-139 (declarant Limberg, endangered Indiana Bats conservationist, regularly takes part in conservation activities in Missouri and Illinois bat habitats, where bats forage over nearby Enlist Duo fields); *accord* ER2079-80 (EPA preliminary finding that Enlist Duo might affect Indiana bats); *see also* A150-155 (declarant Suckling, Arizona watersheds near upland cotton fields, home to three ESA-protected species in which he has interests).[5]

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[5] Dow alleges NFFC Petitioners' injuries are not sufficiently "imminent," but EPA's ESA violations are complete. *Cottonwood*, 789 F.3d at 1081 & n.7 (rejecting imminence arguments because ESA consultation procedural injury is complete when "adopted, so long as [ ] it is fairly traceable to some action that will affect the plaintiff's interests"). Moreover, procedural rights can be asserted "without meeting all the normal standards for redressability and immediacy." *Defenders of Wildlife*, 504 U.S. at 572 n.7. "Because part of [NFFC Petitioners'] claim stems from procedural irregularity, the redressability and imminence of injury requirements are relaxed." *Covington v. Jefferson County.*, 358 F.3d 626, 641 (9th Cir. 2004). To show redressability, NFFC Petitioners "need only demonstrate that compliance with Section 7(a)(2) *could* protect [its] concrete interests." *Nat. Res. Def. Council v. Jewel*, 749 F.3d 776, 783 (9th Cir. 2014); *Salmon Spawning & Recovery All. v. Gutierrez*, 545 F.3d 1220, 1229 (9th Cir.

Dow also challenges farmers' harm from drift, but these harms have *already* occurred, in addition to increased risk of future harm. A140-148; A157-163; A164-173. Dow wrongly relies on *Clapper v. Amenesty Int'l*, 568 U.S. 398 (2013), where injury and causation were supported by mere "speculation" over unknown, and not imminent, governmental phone-listening action, *id.* at 411, a far cry from EPA's certain and now-completed Enlist Duo approval. This case is much more like *Monsanto v. Geertson Seed Farms*, in which the Court held alfalfa farmers had standing from the risk of cross-pollination from genetically engineered (GE) alfalfa, indistinguishable from pesticide drift harms. 561 U.S. 139, 153-155 (2010) (holding USDA's approval of GE alfalfa gave rise to a "significant risk" of gene flow, requiring conventional farmers to take protective measures, including foregoing planting, harms suffered even if they were not actually infected); *compare* A144-145 (declaration explaining protective measures taken and need to forego planting); A157-163; A164-173.

Finally, Dow claims NFFC Petitioners cannot show causation because other sources of pesticide harm exist. ECF 111 at 29-30. Yet in environmental cases

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2008) ("[A] court order requiring the agencies to reinitiate [ESA] consultation would remedy the harm asserted.").

there nearly *always* are a multiplicity of toxic sources causing the harms; this does not defeat standing. *WildEarth Guardians v. U.S. Dep't of Agric.*, 795 F.3d 1148, 1157 (9th Cir. 2015) ("[T]he mere existence of multiple causes of an injury does not defeat redressability, particularly for a procedural injury."). Regardless of other sources, an injury is fairly traceable to a challenged action and redressable if the government can take a "small incremental step" to reduce the overall injury. *Massachusetts v. EPA*, 549 U.S. 497, 524 (2007).[6] It is sufficient that, as government studies have concluded, EPA's approval *will dramatically increase* 2,4-D use, significantly increasing the harm risk, exposing vulnerable crops and protected species at numerous new times during the year. ECF 64-1 at 5-6; (citing USDA studies showing 200-600 percent increase by 2020, ER353); ER1102, Further Excerpts of Record(FER)12.

III. EPA VIOLATED THE ENDANGERED SPECIES ACT

EPA registers pesticides under FIFRA, which requires EPA to avoid "unreasonable adverse effects on the environment" by balancing environmental

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[6] Not even EPA tracks where and when particular pesticides are sprayed. *In re Miller*, 853 F.3d 508, 518 n.4 (9th Cir. 2017) ("[T]he ordinary rule, based on considerations of fairness, does not place the burden upon a litigant of establishing facts peculiarly within the knowledge of his adversary.") (quoting *Campbell v. United States*, 365 U.S. 85, 96 (1961)).

and health risks against benefits. 7 U.S.C. § 136a(c)(5), (7). *See* ER30. EPA's methods to meet these FIFRA obligations establish "levels of concern" allowing EPA to determine when "adverse effects" become "unreasonable." ER2529.

The reasonableness of Enlist Duo's harm to endangered species is not before the Court. EPA violated its separate procedural duty under ESA § 7(a)(2) to consult the U.S. Fish and Wildlife Service (FWS) to help "insure" spraying a pesticide on millions of acres does not jeopardize any of the hundreds of nearby imperiled species or their critical habitats. EPA has no discretion to create its own consultation standard; the ESA mandates consultation whenever Enlist Duo would have "*[a]ny possible effect*, whether beneficial, benign, adverse or of an undetermined character" on any listed species or critical habitat. *Karuk Tribe of Cal. v. U.S. Forest Serv.*, 681 F.3d 1006, 1027 (9th Cir. 2012) (en banc) (internal quotations and citation omitted). EPA *must* consult if registering Enlist Duo has "any chance of affecting listed species or critical habitat—even if it is later determined that the actions are 'not likely' to do so." *Id.*; *see* ECF 64-1 at 19.

EPA did not follow this strict standard, but used lower standards allowing impacts EPA alone considered acceptable. EPA made hundreds of "no effect" determinations despite the record failing to demonstrate "no effect" as the law defines it. Importantly, EPA did not even look for "no effect," but instead

repeatedly made inapposite findings of effects "below levels of concern," or "no *adverse* effects," for which consultation is obligatory. The ESA's term for effects that may be harmless is "may affect, but not likely to adversely affect," with regulatory consequences very different from "no effect." ECF 64-1at 20, 29. If Enlist Duo may have an effect "not likely to *adversely* affect" the species or habitat, EPA still must consult FWS, which must concur. 50 C.F.R. §§ 402.13(a), 402.14(b)(1). For hundreds of species and habitats, EPA refused.

EPA made the same mistake the Forest Service made in *Swan View Coalition v. Weber*. 52 F. Supp. 3d 1133, 1145-46 (D. Mont. 2014) (overturning agency's determination that "trivial impacts on bull trout habitat" comprised "no effect," because they were "sufficient to trigger ESA consultation under the low 'may affect' threshold"). Again in *Native Ecosystems Council v. Krueger*, the agency characterized a timber salvage project's temporary "disturbance effects" as having "no effect" on grizzly bears because connectivity would be maintained and there would be "no net decrease in secure areas." 946 F. Supp. 2d 1060, 1078 (D. Mont. 2013). The court found "[w]hile the 'disturbance effects' may be discountable or insignificant …, 'any possible effect' requires the Forest Service to obtain the concurrence of the Wildlife Service…." *Id.* at 1079.

A. EPA's "No Effect" Determinations Are Arbitrary.

Respondents defend EPA's right to make unilateral "no effect" findings, ECF 83 at 79; ECF 111 at 56 *et seq*. This is uncontested and irrelevant. EPA's findings cannot be unsupported by the record, arbitrary, or ignore the ESA's legal mandates by failing to implement the proper "no effect" standard. Dow is frustrated that EPA lacks discretion to re-define "no effect" for itself, insisting the term cannot possibly mean what this Court has repeatedly decided it means. ECF 111 at 61-62. Dow argues if the Court ruled correctly in *Karuk Tribe* (en banc), the consultation regulations must be invalid. *Id*.

Thus, Dow's *real* issue is with the standard the regulations set and this Court's rulings applying them. Suggesting the regulations cannot require consultation unless an action will jeopardize a species or destroy critical habitat, ECF 111 at 62, Dow fails to acknowledge that Section 7(a)(2)'s *procedural* requirement that action agencies like EPA, without endangered species expertise, consult the wildlife agencies is critical to "insure" the agency complies with the strict *substantive* prohibition against jeopardy. *Sierra Club v. Marsh*, 816 F.2d 1376, 1389 (9th Cir. 1987). The Court should reject Dow's invitation to gut the consultation process and decades of jurisprudence.

The Court also should reject Dow's argument that enforcing the law would unduly burden FWS. ECF 111 at 61. If EPA finds its action "may affect" a species but is unlikely to adversely affect it, FWS need merely agree in writing. *Karuk Tribe*, 681 F.3d at 1029 ("The burden imposed by the consultation requirement need not be great" and "need be nothing more than discussions and correspondence with the appropriate wildlife agency.") EPA followed this process, but only for a handful of species among hundreds. ECF 83 at 25 n.10.

1. EPA's Consultation Standard is Less Protective Than the Law Requires.

EPA's core argument is that whenever Enlist Duo's effects fell below EPA's self-created "levels of concern," which neither exist within the ESA framework nor apply to any other agency, EPA need not consult FWS. ECF 83 at 87 *et seq.* But lacking data-based record evidence showing EPA's "levels of concern" are the thresholds for the consultation trigger—"[a]ny possible effect, whether beneficial, benign, adverse or of an undetermined character," *Karuk Tribe*, 681 F.3d at 1027—EPA's "no effect" determinations are arbitrary.[7]

[7] EPA challenges NFFC to prove impacts, ECF 83 at 85, 93, but the burden to support "no effect" findings with record evidence is wholly EPA's. EPA must "articulate … a rational connection between the facts found and the choice made." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S.

EPA certainly *argues* "[b]elow the level of concern, there is no scientific evidence of 'any possible effect,'" or any "discernable effect," ECF 83 at 84-85, 92-93, 96, but identifies no supporting record evidence.[8] Dow points to FWS guidance that "no effect" findings are valid if the "best available data indicate that the species and critical habitat will not respond in any manner," ECF 111 at 64 n.9, but since it fails to identify any evidence that EPA based its determinations on such data, FWS's guidance serves only to highlight the standard EPA failed to meet. The record instead shows EPA's "levels of concern" are less protective than "no effect," and that EPA itself repeatedly characterizes its determinations as based on finding lack of *harm*—in ESA terms, "not likely to adversely affect," requiring FWS concurrence in consultation—not "no effect."

EPA's risk assessment guidance, designed to implement FIFRA, is permeated with FIFRA's risk/benefit balancing approach. ER2491, 2493, 2500, 2501, 2526 (repeating "unreasonable adverse effect" standard). While ESA §

29, 43 (1983); *Karuk Tribe*, 681 F.3d at 1028 (proof of harm unnecessary "where, as here, a plaintiff alleges a procedural violation under Section 7 of the ESA.").

[8] EPA cites ER72-73, but these are merely conclusory assertions, without explanation or supporting analyses, that it complied with the "no effect" standard. It also cites hundreds of pages of its risk assessment, asserting they contain "no effect" rationales—also unsupported. ECF 83 at 86, 89 (citing SER82-114, 159-407).

7(a)(2)'s consultation requirement is designed to "insure" no species is jeopardized nor critical habitat adversely modified, *Tennessee Valley Authority v. Hill*, 437 U.S. 153, 173 (1978), and "reveals a conscious decision by Congress to give endangered species priority over the 'primary missions' of federal agencies," *id*. at 185, EPA's guidance is designed only to ensure protections are the "least disruptive to agriculture and other pesticide users." ER2549; *Washington Toxics Coal. v. U.S. Envt. Prot. Agency*, 413 F.3d 1024, 1035 (9th Cir. 2005) (ESA and FIFRA have different goals and standards).

Relying on its "levels of concern," EPA therefore assessed risk by evaluating whether Enlist Duo exposure will cause "adverse effects," instead of whether it has "any chance" of having "[a]ny possible effect, whether beneficial, benign … or … undetermined," *Karuk Tribe*, 681 F.3d at 1027; ER2529 ("Risk characterization integrates the results of exposure and toxicity data to evaluate the likelihood of *adverse* ecological effects on non-target species.") (emphasis added); ER2514 (risk assessment looks for "reduced survival and reproductive impairment."). That is the wrong standard.

2. EPA's "Risk Quotients" and "Levels of Concern" Do Not Measure "No Effect."

EPA's risk assessments of endangered species are based on measures of *harm* risk—the pesticide's LD50 or LC50, which measure the amount of a

chemical that kills half a sample population,[9] or the No Observed *Adverse* Effect Concentration (NOAEC), SER36-37 ("Measures of Ecological Effect."); ECF 83 at 100 (acknowledging use of NOAEL for Indiana bat assessment). ER2529; ER2525; SER37 (LD50 and LC50 used as toxicity endpoints). EPA divides estimated exposure by the pesticide's toxicity to generate a Risk Quotient (RQ), measuring mortality risk, derived from the LD50 or LC50. ER2529. EPA then applies to this RQ a "level of concern" (LOC) EPA creates using internal "interpretative policy." ER2529. EPA uses LOCs as a "policy tool" to "indicate when a pesticide use as directed on the label has the potential to cause *adverse effects* on non-target organisms." *Id.* (emphasis added). Again, the wrong standard.

Although EPA bemoans its inability to prove a negative, ECF 83 at 84-85, a No Observed Effect Concentration (NOEC) does exist, EPA just chose not to use it—although EPA agreed to do so for FIFRA-mandated pesticide registration reviews, after being so advised by the National Academy of Sciences.[10]

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[9] LD is Lethal Dose, LC is Lethal Concentration.

[10] U.S. EPA, *Interim Approaches for National-Level Pesticide Endangered Species Act Assessments Based on the Recommendations of the National Academy of Sciences April 2013 Report* 6 (2013), https://www.epa.gov/sites/production/files/2015-07/documents/interagency.pdf (last visited Sept. 11, 2018) (*Interim Approaches*) ("For animals, the lowest

EPA lacks discretion to make "policy" at odds with legal mandates. "Adverse effect" (measured by the NOAEC) is not the ESA consultation standard, and EPA's "levels of concern" do not measure a hypothetical "no effect" exposure; they reflect EPA's "interpretative policy" on how much risk of mortality EPA considers acceptable, ER2529, which EPA arbitrarily labels "no effect" whenever the Risk Quotient does not exceed its "level of concern" (EPA's acceptable mortality risk). ER2554. Consequently, the National Academy of Sciences criticized EPA's RQs as "not scientifically defensible for assessing the risks to listed species posed by pesticides…." ER1212-1213.

EPA assesses risks to endangered animals exactly the same way it does with common species under FIFRA, except it uses an arbitrarily higher Risk Quotient for the latter. ER2529-2530 (listing LOCs, or acceptable RQs, for different taxa); ER2530 ("Endangered species acute LOCs are a fraction of the non-endangered species LOCs"). But *the record reveals no basis for concluding the higher RQs are the threshold for "no effect" for any, let alone all, endangered species*. Instead, the record shows EPA found its action causes *measurable risks* to every species it assessed, which EPA arbitrarily labeled "no effect." *E.g.*, SER90 ("A chronic RQ

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available NOEC or other scientifically defensible effect threshold (ECx) will be used.").

of 0.31 does not exceed the chronic LOC of 1.0 for listed species. Consequently, it is reasonable to make a 'no effect' determination for the Indiana bat."); SER93 (same, for grey wolf). According to this Court's precedent and the expert wildlife agencies, even an "insignificant" effect that cannot be "meaningfully measure[d], detect[ed], or evaluate[d]" triggers consultation.[11]

As a matter of law, EPA is looking through the wrong lens. Section 7(a)(2) grants EPA no discretion to refuse consultation when effects are "a fraction of" its FIFRA-based mortality risk to common species. EPA's own brief shows it applied the wrong consultation standard. *E.g.*, ECF 83 at 87 ("levels of concern" show "potential to cause *undesirable* effects") (emphasis added); *id*. at 97-98 (applying NOAEL).

3. EPA's No Effect Determinations Are Not Due Deference.

Respondents fail to show EPA applied the required consultation standard, instead insisting it is "cautious," and try to characterize the issue as EPA's "methodology," inviting the Court to defer to the "considered judgment of EPA as to how to conduct its endangered species analysis." ECF 83 at 108; ECF 111 at 67

[11] U.S. FWS & NMFS, *Final ESA Section 7 Consultation Handbook, March 1998* (1998) (*Consultation Handbook*), https://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf, at xv, 3-13, B-55.

n.10, 75. Deference is wholly inappropriate because Congress did not empower EPA to implement the ESA or grant it ESA policy-making authority; EPA's FIFRA regulations are not relevant, and EPA's technical expertise is not the problem here. *Karuk Tribe*, 681 F.3d at 1017 (explaining that "agency's interpretation of a statute outside its administration is reviewed de novo"). EPA's "methodology" might pass muster if used to consult when there is "any chance" of "any possible effect, whether beneficial, benign [or] adverse," *id.* at 1027. EPA violated Section 7(a)(2) because its analyses implemented EPA's "interpretative polic[ies]," ER2529, to make "no effect" findings contrary to this standard. The Court must not "rubber-stamp … administrative decisions … inconsistent with a statutory mandate or that frustrate the congressional policy underlying a statute." *Arizona Cattle Growers' Ass'n v. U.S. Fish & Wildlife Serv.*, 273 F.3d 1229, 1236 (9th Cir. 2001) (citation omitted). EPA's claimed expertise in "evaluating how a pesticide will be used and the toxicology of those pesticides," ECF 83 at 82, does not help, since EPA applied any such expertise to the wrong legal standard,[12] and

[12] EPA argues the Court in *Friends of the Santa Clara River v. U.S. Army Corps of Eng's,* 887 F.3d 906, 923-27 (9th Cir. 2018), upheld a "no effect" finding "based on the [action agency's] expertise," ECF 83 at 93-94, but the Court found the project would not increase *at all* the risk to any listed species, 887 F.3d at 923-24, rather than that those impacts were merely not "of concern."

EPA has no expertise in endangered species conservation, nor in any of the species it assessed—which is exactly why Congress required that it consult FWS. *City of Tacoma v. F.E.R.C.*, 460 F.3d 53, 75 (D.C. Cir. 2006).

4. EPA's Species-Specific Assessments Apply the Wrong Consultation Standard.

EPA argues it was not required to consult merely because its screening-level assessments showed potential effects on hundreds of endangered species, because it then made more refined analyses purportedly showing "no effect." ECF 83 at 93. This does not cure EPA's failure, since (1) EPA categorically declined to perform *any* additional analyses for all but the handful of species known to inhabit sprayed fields, ignoring hundreds,[13] *see infra* III B.; and (2) EPA's few refined assessments substituted EPA's "levels of concern" and "No Observed Adverse Effect Level" for "no effect."[14] EPA also periodically repeats the strawman argument that it was not "automatically" required to consult just because a listed species exists within the

[13] EPA's assertion it "conducted multiple detailed analyses for hundreds of listed species," ECF 83 at 89, is wildly inaccurate. As its cited record pages show, it conducted about two dozen refined analyses, categorically ignoring hundreds because they were not on sprayed fields. SER82-114, 159-407.

[14] Although Respondents note NFFC cited EPA's 2014 risk assessments instead of the 2016 versions, Respondents point to no differences material to NFFC's arguments. ECF 83 at 98-99, ECF 111 at 77 n.11, 81.

action area, which it erroneously defined as limited to sprayed fields, *see infra*. ECF 83 at 81,83,88). Regardless, EPA's consultation duty depends on legitimate effects determinations, and EPA's are legally flawed.[15]

EPA's whooping crane refined assessment *found risk*, but below EPA's "level of concern," ECF 83 at 95, requiring consultation. EPA offers: "[A] risk quotient between zero and [EPA's] level of concern means that the pesticide would have no effect." *Id*. at 95-96. EPA identifies no record basis for this *ipse dixit*. EPA cannot re-define "no effect" to mean whatever it likes. Similarly, EPA based its Indiana bat assessment on the "dose level at which there are no observed *adverse* effects," ECF 83 at 97-98 & n.38, 100-101, (emphasis added), and EPA's "level of concern," *id*. at 98, not "no effect."

a. EPA Did Not Use or Seek the Best Available Data.

Respondents argue EPA must be deemed to have used the best available scientific data in its analyses unless NFFC Petitioners identify better data. ECF 111

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[15]Ironically, it is EPA's own policy, that EPA agreed to follow during registration review, that applies exactly such a rule. *See Interim Approaches, supra* note 10, at 7 ("For species and critical habitats that do overlap with the action area, the call *will be 'May Affect,'* and the analysis *will proceed* with" determining whether the action is "likely to adversely affect" or "not likely to adversely affect" the species, the latter requiring FWS's written concurrence.) (emphases added.)

at 83. First, EPA itself identifies better data it ignored. When assessing risk to the whooping crane, EPA did not bother to review the International Whooping Crane Recovery Plan, a document so basic to an effects determination that EPA itself cites it—in its brief, from outside the administrative record. ECF 83 at 95.[16]

Second, "[d]eference does not mean acquiescence." *Presley v. Etowah County Comm'n*, 502 U.S. 491, 508 (1992). EPA relied on its 1993 Wildlife Exposure Factors Handbook, but that document itself emphasizes EPA should not rely on it and exclude FWS input for EPA's refined assessments. The Exposure Handbook was expressly limited to "*screening-level* risk assessments for *common* wildlife species," ER2592 (emphases added). It therefore cautions that when, as here, EPA makes a refined, site-specific analysis, it should not rely on the Handbook, but seek additional data *and FWS's assistance*:

> [I]t is important to note that the values for exposure factors presented in this Handbook *may not accurately represent specific local populations*. …. Site-specific values … can be determined more accurately using published studies of local populations and *assistance from the U.S. Fish and Wildlife Service*….

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[16] EPA misleadingly cites the Recovery Plan as suggesting pesticides are not a threat, while omitting the nearby language: "Contaminants could be impacting the [Florida population], especially since some of the females in Florida have been found with improperly developed reproductive organs." U.S. FWS, *International Recovery Plan for the Whooping Crane (Grus americana)* 29 (3d rev., Mar. 2008), *available at* https://www.fws.gov/uploadedFiles/WHCR%20RP%20Final%207-21-2006.pdf.

ER2595 (emphases added).

The Handbook contains no information about any crane or bat, so EPA's reliance on it was that much riskier. Yet EPA—with no endangered species expertise—disregarded this, using "allometric equations" instead of consulting FWS for data about the actual species being assessed. ECF 83 at 88; SER8-9 (describing unresolved "Key Uncertainties and Information Gaps" in EPA's risk assessment.) EPA's shortcuts do not reflect agency expertise and are not entitled to deference, are hardly "conservative," and additionally show its purported "no effect" determinations are arbitrary.

B. EPA's Refusal to Consider Impacts Beyond the Crop Fields Violated the ESA.

The "action area" must include "all areas to be affected directly or indirectly by the Federal Action and not merely the immediate area involved in the Action." 50 C.F.R. § 402.02. Yet EPA limited the registration's "action area" to the sprayed crop fields, categorically eliminating hundreds of endangered species and critical habitats from any consultation consideration because they exist off-field. ECF 64-1 at 32 *et seq.*; SER82-83.

Dow argues the law fails to define "what it means for an area to be 'affected directly or indirectly' by an action, and thus leaves that issue up to the action

agency," so every agency can define "affect" however it pleases. ECF 111 at 75. FWS and NMFS, which promulgated the regulations, apply the term consistently throughout them.[17] Dow also suggests defining an ESA action area is all just agency "methodology" entitled to deference, citing *Friends of the Wild Swan v. Weber*, 767 F.3d 936, 950 (9th Cir. 2014). *Id.* Again, methodology cannot defy legal requirements, and EPA gets no ESA deference. And in *Wild Swan*, the Court found "[a]lthough some critical habitat does exist within this action area, the Forest Service *and USFWS agreed* each project was *not likely to affect the habitat or species adversely*," 767 F.3d at 950 (emphases added)—exactly the determination EPA was here required to seek during consultation, but did not.

EPA argues mitigation measures preclude Enlist Duo from having any effect beyond sprayed fields. ECF 83 at 103. This fails, first, because as this Court observed in *Karuk Tribe*, needing mitigation measures "cuts against, rather than in favor of" no duty to consult, since it underscores that effects are possible, 681 F.3d at 1028, and these mitigations depend upon strict compliance with detailed

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[17] *Consultation Handbook*, *supra* note 11, at x ("**'Affect'** appears throughout section 7 regulations and documents in the phrases 'may affect' and 'likely to adversely affect.' **'Effect'** appears throughout section 7 regulations and documents in the phrases 'adverse effects,' 'beneficial effects,' 'effects of the action,' and 'no effect.'").

instructions by thousands of growers with little oversight, *Weber*, 52 F. Supp. 3d at 1145 (because the Forest Service's determination "through the imposition of a buffer zone that the impact is sufficiently mitigated as to result in 'no effect'... ignores the low threshold for 'may affect,' the Forest Service is required to engage in at least some consultation under the ESA."); *Ctr. for Biological Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139, 1152 (D. Ariz. 2002) (mitigation must be specific, reliable and reasonably certain to occur) (citing *Marsh*, 816 F.2d at 1376).

Consequently, the Interim Report EPA touts (ECF 83 at 96 n.37) as confirming its approach's appropriateness instructs:

> The action area will be defined by identifying pesticide use areas (i.e., the pesticide use footprint) based on currently registered labeled uses (i.e., the Action). *In addition, the action area will include a footprint that extends beyond the use sites to incorporate off-site transport including pesticide spray drift and runoff.*[18]

EPA's action area includes no such extension.

Second, although Respondents argue Enlist Duo is less volatile than the form of the pesticide in the record evidence demonstrating drift, ECF 83 at 104-105, ECF 111 at 77, this claim is unsupported by substantial evidence, *see infra*,

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[18] EPA, FWS, and NMFS, *Interim Report to Congress on Endangered Species Act Implementation in Pesticide Evaluation Programs* (Nov. 2014) 5-6 (emphasis added), *available at* https://www.epa.gov/sites/production/files/2015-07/documents/esareporttocongress.pdf.

but even if it were true, it is immaterial. EPA still applied the wrong legal standard when concluding its mitigations eliminated any consultation obligation beyond the fields. To be sure, EPA continues to *argue* "no effect," claiming it determined there were "no off-field non-target plant effects." ECF 83 at 57. Instead, the record shows EPA looked for "statistically significant growth or survival damage," arbitrarily equating failure to observe such harm with "no effect." ECF 83 at 53, 55-56. *Washington Toxics Coal. v. U.S. Dep't of the Interior*, 457 F. Supp. 2d 1158, 1187 (W.D. Wash. 2006) (criticizing "EPA's inattention to the full spectrum of indirect effects and sublethal effects beyond growth and reproduction that could nevertheless impact species' survival."); ER647 (EPA risk assessment equating 2,4-D vapor concentrations below level causing 20 percent physical injury to grape as predicting "no adverse damage" to off-site plants—not "no effect"); ER648 (same); ER644 (EPA admitted "without spray drift mitigation, direct effects are predicted … to terrestrial plants" due to runoff, concluding mitigations merely "*reduce*" exposures off site to levels "below risk concern levels.") (emphasis added). "Below risk concern levels" and "no adverse damage" are not "no effect." *See Karuk Tribe*, 681 F.3d at 1028 (mitigation reducing, rather than eliminating, impacts does not meet "no effect" standard).

Again, EPA must consult on any effects, even those "not likely to adversely affect," requiring FWS's written concurrence. So even assuming EPA's action area designation precludes off-field "adverse damage," it allows effects requiring consultation. EPA's categorical refusal to consult on any of the hundreds of species and habitats outside the field boundaries therefore was contrary to law.

Dow's contention that NFFC Petitioners must prove drift will occur, ECF 111 at 78, is incorrect. EPA action area designation requires record evidence of "no effect" off-field. *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 902 (9th Cir. 2002) ("Because the Forest Service provides no evidence in the record that this area coincides with the 'action area' required to be analyzed under the ESA and regulations, we reverse.") (citation omitted). Conclusory assertions or label restrictions unsupported by proof of their efficacy, ECF 111 at 78, do not satisfy EPA's burden.

Similarly, Respondents cannot rest on EPA's conclusory assertion that all effects will be limited to treated fields to avoid assessing the effects on protected species found *outside* fields of the Enlist Duo-laden prey, water, and vegetation that cannot be confined to sprayed fields. ECF 83 at 104; ECF 111 at 78. EPA must meet its burden to examine off-field effects by pointing to pertinent studies showing there will be none, and cannot shift that burden to NFFC.

C. EPA Arbitrarily Refused to Consider Effects on Critical Habitat.

EPA does not dispute it categorically refused to consult on *any* of the 184 habitats FWS designated as "critical" to species' survival and recovery, based on exemptions EPA made up for itself. ECF 64-1 at 49-50; ECF 83 at 106-107. EPA invented from whole cloth a rule that it need not consult FWS unless "(a) the species uses corn, cotton or soybean fields as habitat *and* EPA has already made a 'may affect' determination for the species; *or* (b) the species uses corn, cotton or soybean fields *and* the effects from the new uses would affect one of that species' primary constituent elements." ECF 83 at 106; SER112.[19] Although EPA pronounces its rule "logical," ECF 83 at 105, it fails to rebut that it contradicts the ESA. It cites no authority for its protocols; none exists. EPA "relied on factors which Congress has not intended it to consider," and "failed to consider factors it was required to assess." *State Farm*, 463 U.S. at 42-43.

First, Respondents misunderstand the critical habitat consultation standard, which is identical to the low "may affect" standard applicable to ESA-protected species themselves. *Karuk Tribe*, 681 F.3d at 1027. EPA admits it "determines

[19] EPA argues it formulated its critical habitat categorical exemptions in its 2004 Overview, ECF 83 at 108, but fails to show that document contains them, or explain why it matters when or where EPA concocted them.

there will be *no adverse modification* of critical habitat." ECF 83 at 106 (emphasis added). EPA lacks this authority: it *must* consult if the registration "may affect" critical habitat, and an "adverse modification" determination requires FWS's written concurrence during consultation. 50 C.F.R. § 402.13(a).

Second, EPA offers no clue why it imagines it may opt out of consultation where the pesticide may affect critical habitat, but the species does not currently occupy it, since critical habitat may be designated regardless of whether the species currently occupies it. ECF 64-1 at 52-54. Nor does EPA offer any basis for the second requirement: unless EPA made a "may affect" finding for the *species*, EPA assumes "no effect" on its critical habitat. EPA's critical habitat consultation duties are independent of any effect on species themselves. 50 C.F.R. § 402.14(a) (consulting FWS "required" if "any action may affect listed species *or* critical habitat") (emphasis added). The first prong of EPA's protocol is unlawful.

EPA's second prong also requires the species to currently occupy the critical habitat before EPA will even consider possible habitat effects, but the ESA includes no such requirement. EPA's argument that it considered impacts to the critical habitats' primary constituent elements (PCEs), ECF 83 at 109-10, fails to cure its arbitrary refusal to consider whether 176 of 184 critical habitats may be

affected, because it found the listed species dependent on them do not currently use crop fields. SER112.

Dow argues that some critical habitat designations may be based on species' current use, ECF 111 at 88, but neither identifies any such habitat, nor denies EPA *categorically* assumed "no effect" on *all* critical habitats unless the species currently occupies it. Dow's pronouncing EPA's disregard of EPA's consultation duty "harmless," *id.* at 89, similarly ignores that EPA's protocols violate ESA § 7(a)(2)'s procedural mandate as a matter of law, and NFFC Petitioners need not show injury. *Karuk Tribe*, 681 F.3d at 1028.

D. The ESA Caselaw Supports Petitioners.

Respondents cite cases confirming action agencies may make "no effect" determinations when the data show *no effect*, or that overlap with an action area may not *automatically* require consultation. However, no court has approved a "no effect" determination where effects merely fall below an agency's "level of concern," or are not "adverse."

In *Defenders of Wildlife v. Flowers*, 414 F.3d 1066 (9th Cir. 2005), the Court upheld a "no effect" finding because "no pygmy-owls had been found to live within [the] project area," *id.* at 1070—there was nothing to be affected. Although the plaintiffs argued the action would disrupt the species' habitat, the habitat's

designation as "critical" had been removed, eliminating the legal protections that classification affords all of the 184 critical habitats where EPA approved Enlist Duo. *Id.*[20]

The plaintiffs in *Friends of the Santa Clara River* challenged the Army Corps' "no effect" finding where a project would discharge into a river dissolved copper the plaintiffs argued might harm steelhead. The Court upheld the finding because it was undisputed the copper levels would be below the river's background levels and therefore would not increase the risk, if any, the fish already faced. 887 F.3d at 923-24. *See also Ctr. for Biological Diversity v. U.S. Army Corp. of Eng'rs*, CV. 14-1667 PSG (CWx), 2015 WL 12659937, at *14-16 (C.D. Cal. June 30, 2015) (discharges would *lower* any risk by diluting the river's copper concentration). EPA's analysis shows only that its registration will not cause harm above EPA's "level of concern."

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[20] EPA notes that unlike here, FWS objected to the "no effect" determination, ECF 83 at 80; *see also* ECF 83 at 85 (same regarding *Western Watersheds Project v. Kraayenbrink*, 632 F.3d 472 (9th Cir. 2011)), but EPA's consultation duty is compelled by ESA § 7(a)(2). FWS has taken no position on EPA's failures here, but FWS could not waive consultation if it wanted to. Hearsay about FWS's purported views on EPA's guidance and methods are similarly irrelevant. *See* ECF 83 at 96-97, 108.

In *Ground Zero Center for Non-Violent Action v. U.S. Dep't of the Navy*, 383 F.3d 1082 (9th Cir. 2004), the plaintiffs sought consultation arguing missiles might accidentally detonate, harming salmon. But the decision to house missiles at the base was made by executive order, not an agency discretionary action subject to the ESA, as here. *Id*. at 1092. In *dicta*, the Court observed the risk of accidental explosion was so speculative as to be "infinitesimal." *Id.*

The record here hardly shows the likelihood of "any effect" on any listed species and habitats is entirely speculative or "infinitesimal." There was no basis in *Ground Zero* to assume missiles would accidently explode beyond that such risk was not categorically impossible. In sharp contrast, EPA *admits* species and habitats will be exposed to the toxic herbicide, and all of its assessments (such as for the whooping crane) show measurable risk, but it argues there will be "no effect" only because the risk does not exceed EPA's FIFRA-based "level of concern," or will not cause "adverse damage."

The Eighth Circuit in *Newton County Wildlife Ass'n v. Rogers*, 141 F.3d 803 (8th Cir. 1998), did not review the agency's "no effect" determination, but anomalously assumed the finding's mere existence obviated any need to consult, as though the agency had no obligation to support the determination with record

evidence. That is not the law in this Circuit, *Washington Toxics*, 413 F.3d at 1035; *Dombeck*, 304 F.3d at 902, if it is anywhere.

Finally, EPA's efforts to factually distinguish *Karuk Tribe*, *Kraayenbrink*, *California ex rel. Lockyer v. U.S. Dep't of Agric.*, 575 F.3d 999 (9th Cir. 2009), and *Washington Toxics,* 457 F. Supp. 2d 1158, ECF 83 at 83-86, all miss the point. These decisions collectively articulate this Circuit's standard for a lawful "no effect" determination, which is lower than the risk/benefit, "level of concern," or "no adverse effect" approaches EPA applied.

Nor are the cases factually inapposite. EPA notes the action agency in *Karuk Tribe* did not dispute its activity might affect species, ECF 83 at 84, but fails to acknowledge the industry intervenor vigorously did, and that the Court held: (1) plaintiffs have no duty to show species will be harmed, and (2) reliance on mitigation "cuts against, rather than in favor of," a "no effect" finding, particularly where mitigation merely "reduces" impacts. *Karuk Tribe*, 681 F.3d at 1028. *See* SER5 (mitigation may "reduce" off-site effects below "levels of concern.").

EPA notes *Washington Toxics,* 457 F. Supp. 2d 1182, 1188, confirmed an action agency may make a "no effect" finding, ECF 83 at 85, which is undisputed. The court also invalidated a regulation allowing EPA to unilaterally make "not likely to adversely affect" determinations. 457 F. Supp. 2d at 1177. That is exactly

the effect of what EPA did here—without such a regulation—by labeling "not likely to adversely affect" determinations "no effect." Similarly, while EPA tries to distinguish *Kraayenbrink* by citing its own "carefully documented determination that the registration decisions would have no effect on listed species," ECF 83 at 85, it fails to point to any record evidence establishing "no effect," rather than merely "less effect."

IV. EPA VIOLATED FIFRA

A. EPA Used the Wrong FIFRA Standard.

Respondents admit EPA used the wrong standard, applying an unconditional registration standard in issuing a conditional new use. They argue the error was harmless, but are wrong.

First, FIFRA contemplates a two-step process for a new use registration: a conditional new use must be preceded by a general registration that itself meets the basic FIFRA "will not generally cause unreasonable adverse effects" standard. 7 U.S.C. § 136a(c)(5)(D). Any conditional new use approval must tier off that, and EPA must show why the new use will not "significantly increase the risk" of any adverse effects *above and beyond* the preexisting registration. *Id*. § 136a(c)(7)(B); ECF 64-1 at 57-59. Congress did add conditional registrations to create flexibility, but intended them to be the exception, not the rule. *Id*. § 136a(c)(7) (entitled "Registration under special circumstances"). Thus, where data are missing, Congress allowed temporary conditional registration, but required further safeguards—including a finding that registration will not even increase the risk of adverse effects occurring. The difference is not harmless error.

Second, the tests are different, and the conditional new use test is not in all ways "less demanding." Conditional registration allows for the temporary absence

of general safety data, as EPA itself explains, ECF 83 at 34 ("When there are missing data associated with the active ingredient, generally, but not data specific to the use being reviewed, EPA can only consider a *conditional* registration"); in this way it is less demanding. In return, it sets a higher bar for assessing risks, based on the data the agency does have, 40 C.F.R. § 152.113(a)(1)-(2), specific to the new use: the agency must conclude not merely that the pesticide's new use will not "generally cause" unreasonable adverse effects, but that it also will not even "significantly increase" the risks of those adverse effects happening, above and beyond the currently-registered uses. Imagine a rulemaking with a supporting study showing texting while driving does not "generally cause" car accidents. That would be sufficient for the test EPA used. The evidence might not show texting outright causes accidents, but does texting while driving *increase the risk* of a car accident? That analysis is different in kind.

Third, if EPA was going to use the unconditional registration test, it should have applied all of it, not just the part it cherry-picked. That test also requires that EPA find the pesticide will not generally cause unreasonable adverse effects "when used in accordance with *widespread and commonly recognized practice*." 7 U.S.C. § 136a(c)(5)(D) (emphasis added). Enlist Duo is the antithesis of that: Prior to this approval, 2,4-D was not, could not, be sprayed on growing commodity crops. This

use of 2,4-D is *unprecedented*. ECF 64-1 at 4-7. EPA does not even attempt to argue it met this factor, or how it could have. This underscores the tests are different, and it is not harmless for EPA to apply one in place of another willy-nilly.

Finally, it is not true, as Respondents claim, that conditional registrations are categorically less stringent than unconditional ones. This Court recently held EPA could not ignore a requirement for another type of conditional registration, mandating that EPA make a finding, beyond that for unconditional registration, that its action is in the public interest. *Nat'l Res. Def. Council v. U.S. Envtl. Prot. Agency*, 857 F.3d 1030 (9th Cir. 2017). The Court held such a finding was an additional safeguard Congress demanded for allowing such a temporary conditional registration. *Id*. at 1037-38 (discussing legislative history). Because EPA assumed it had met that finding and did not support it with substantial evidence, the Court vacated the registration. *Id*. at 1042. It was not enough that EPA found the registration had the "potential" to be in the public interest; this Court held the agency had to find the registration "*is* in the public interest." *Id*.

Similarly, finding a pesticide's unconditional registration "will not generally cause unreasonable adverse effects" is not the same as finding the conditional new use of that pesticide in a novel way will not "significantly increase the risk of any

unreasonable adverse effect on the environment" beyond the underlying registration. EPA used the wrong standard.

B. EPA's Volatility Assessment Violated FIFRA.

Volatility, or vapor drift, is a critical issue: 2,4-D has caused more drift-related crop damage than any other herbicide. ER1959-2000 (listing episodes); FER152, 164-172 (pesticide drift surveys of state pesticide control officials). Yet EPA's key assessment was based on deficient data, in violation of its regulations. This failing cannot be cured by subsequent review of "multiple studies" (*see* ECF 83 at 49-50) any more than a rotten foundation can be fixed by building on it. Consequently, EPA's conclusion that vapor drift will not harm off-field plants was not supported by substantial evidence. The legal answer is straightforward. *Pollinator Stewardship Council v. U.S. Envtl. Prot. Agency*, 806 F.3d 520, 529-30 (9th Cir. 2015) (registration vacated for improper reliance on flawed study rather than require new one).

As Petitioners explained, the foundational Dow study EPA used to determine the maximum 2,4-D vapor exposure that would not have unreasonable adverse effects was irreparably flawed. *See* ECF 64-1 at 59-62. This "Ouse study" (ECF 83 at 50-51) was, according to EPA, "of very limited value," leaving "uncertainty regarding the effects of vapor-phase exposures on non-target plants"

because it did not "measure[] quantitative endpoints and … did not use a control" ER2086-2087. It did not adhere to Good Laboratory Practice (GLP) standards nor to regulatory test guidelines. ER3191 (Ouse study was "[redacted]" and "[redacted]"); 40 C.F.R. § 160.1(a) (requiring Good Laboratory Practices "to assure the quality and integrity of data" submitted to satisfy FIFRA).[21] EPA told Dow to repeat the study, but with quantitative vegetative vigor endpoints as prescribed by EPA's regulatory Test Guidelines 850.4150,[22] required at 40 C.F.R. § 158.660(d). ER2032. It was never submitted. ECF 64-1 at 61.

As an initial matter, EPA claims the replacement study was submitted. EPA states (ECF 83 at 53-54 & n.21) that a submitted vapor flux *field* study (Havens study update) is in fact the do-over vapor phase *laboratory* study it had requested from Dow. This is incorrect.[23] Neither did this Havens study update "confirm[] the levels of visual damage that equated to growth or survival effects" (ECF 83 at 53),

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[21] [redacted] SER685, SER497.

[22] *Available at* https://www.regulations.gov/document?D=EPA-HQ-OPPT-2009-0154-0024 (last visited Sept. 12, 2018).

[23] *Compare* SER448-49 [redacted] *with* ER2032 (requesting Guideline 850.4150-compliant study).

because [redacted]. SER494.

Respondents mainly argue the Ouse study could be salvaged by relating it to six non-GLP literature studies not conducted on Enlist Duo or 2,4-D choline. ECF 83 at 53-54. Instead of continuing to demand the new study, EPA attempted to translate the Ouse study's visual damage ratings into the yield/growth endpoints of these six Dow-submitted studies. ER2082-83. Respondents make much hay of this, to no avail.

First, the numerical visual damage ratings Dow assigned are guesstimates, not quantitative measurements. ER3191 ("[redacted]"); ER3192 ("[redacted]""). Translating these guesstimates into a different metric ("growth/weight" endpoints) is akin to translating a faulty speedometer's miles per hour reading into kilometers per hour.

Second, the Ouse study differs radically from these studies in ways that invalidate "translation." Crucially, the Ogg study EPA used to establish the 20% visual damage threshold (ECF 83 at 53) employed grape plants of vastly different

age and species than the Ouse study,[24] and [redacted]

[redacted]

Third, the yield metric in the six studies (ER2082-83: Table 31) is also not a valid endpoint in EPA's 850.4150 regulatory guidelines, which prescribe instead height, biomass, and survival (*see* n.23 *supra*, p.1). Thus, *neither measure* of plant damage that EPA utilized (visual plant damage nor yield) is guideline-compliant.

Fourth, as previously explained (ECF 64-1 at 61-62), the January 2013 risk assessment's assumption that 20% visual damage to grapes was the critical harm threshold was contradicted, *three weeks later*, by EPA scientists' [redacted] ER3191-92 ([redacted]). Similarly, the request for the never-submitted Ouse study replacement was made in the same 2013 risk assessment in which EPA undertook the jerry-rigged "translation" exercise, showing EPA scientists' lack of confidence in it. (Notably EPA's 2016 volatility risk assessment is identical to that of 2013, except it eliminates the call for a new study to resolve uncertainties (ER646-47)).

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[24] In Ogg: 8-12 year old Concord grape (*Vitis labruscana*) vines (SER436-37); [redacted]

Finally, Dow's non-GLP field volatility study is similarly too flawed to determine 2,4-D choline's volatilization, or flux, rate. SER449 [redacted] SER463 [redacted] One failing was [redacted] SER463, [redacted] EPA Test Guideline 835.8100,[25] required by 40 C.F.R. § 158.1300(d). A second was [redacted] SER463. Finally, EPA suggests that vapor-phase lab and field studies are mutually supportive, ECF 83 at 53-54 *et seq.*, but EPA scientists actually found they "yielded *opposite conclusions* regarding the potential for effects to terrestrial plants." ER2087 (emphasis added). For all these reasons, EPA's volatility determination was not supported by substantial evidence.

C. EPA Failed to Account for Glufosinate's and Enlist Duo's Synergistic Effects.

Respondents again try to make this argument about detailed technical matters, but it is not: this is a straightforward FIFRA requirement. The definition of "pesticide" includes "mixture of substances intended for use…." 7 U.S.C. §

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[25] *Available at* https://www.regulations.gov/document?D=EPA-HQ-OPPT-2009-0152-0030 (last visited Sept. 12, 2018). *See* 835.8100(d)(3)(ii) ("The test substance should be applied … at the rate stated in the label directions for the pesticide").

136(u)(2). This means if there is a pesticide combination tank mix intended for use, EPA must analyze it and consider it in its decision whether a pesticide's approval will "significantly increase the risk of any unreasonable adverse effect on the environment," *id.* at § 136a(c)(7)(B), and support that decision with substantial evidence. EPA did not. Instead it claims it will analyze these impacts in some later process, but as explained below, that is inaccurate.

First, pesticides used in combination can have synergistic effects different from and greater than when used in isolation, creating "unreasonable adverse effects." ER55; ER3 n.1. These risks can be so significant that in *Enlist Duo I*, the Court remanded the registration to EPA specifically to assess 2,4-D's and glyphosate's synergy risks. ECF 64-1 at 7-9, 63-65.

Second, this is not, as EPA alleges, some random, "hypothetical" combination concern: along with 2,4-D and glyphosate, Dow went to the trouble and expense to genetically engineer its Enlist crops to *be resistant to a third specific pesticide*, glufosinate. So from the outset, [redacted] ER3202, ER3188-89. Dow touts that Enlist crops uniquely allow *all three herbicides* to be applied together to control weeds, and markets this as a reason for farmers to choose Enlist cotton and soybean. FER1 ("Enlist soybeans and Enlist™ cotton offer a third weed

control option by providing full tolerance to glufosinate. That means only in fields of Enlist soybeans and Enlist cotton…will growers have the option of using three different modes of action to which the crop is tolerant to manage hard-to-control and resistant weeds.").

Third, the planned mixture of Enlist with glufosinate unquestionably increases its toxicity. Evidence that these mixtures are more toxic to plants "in combination than when applied individually," ER473, and thus exhibit synergy, was available to EPA in a Dow patent, ER471-482, specifically claiming synergy between glufosinate and 2,4-D, as well as in two academic studies with Dow scientists as co-authors, ER129-135, 136-143. The first study showed control of the weed Palmer amaranth with "all glufosinate/auxin [including 2,4-D: ER131, Table 2] combinations was greater than control by the auxin herbicides alone or glufosinate alone," ER132, which is a definition of synergy. In the second study, "tank mixtures of glufosinate plus 2,4-D or systems containing both 2,4-D and glufosinate were among the most effective for controlling emerged Palmer amaranth," ER142, and were more toxic to the plant than either 2,4-D or glufosinate alone (ER140, Table 1).

Respondents protest that Dow allowed the U.S. patent to be abandoned. ECF 83 at 60. But as explained, other evidence of synergy exists, plus, there is no

reason to think the patent's strong synergy claims are invalid just because Dow abandoned it, particularly since Dow applied for or was granted almost identical patents around the world after abandonment.[26] It is the record evidence for glufosinate/2,4-D synergy claims within the application that is relevant, and not the status of one version of the patent. Regardless, use of glufosinate in combination with Enlist Duo in no way depends on an active U.S. patent claiming synergy.

Fourth, Respondents basic response—glufosinate cannot be used with Enlist Duo unless EPA takes further regulatory action, when the agency presumably will address synergy risks, ECF 83 at 61-63—is false. There exists no future registration decision for EPA to pass the buck to, where it will then assess these impacts. Rather, as established in this approval, Enlist Duo can now be tank mixed with glufosinate so long as the mixture does not increase *spray* drift. ER32. Yes, EPA is requiring some further process. But what it set up in this approval for that further process does *not* include synergistic effects; they are *different* inquiries.

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[26] Australian Patent, *Synergistic herbicidal weed control from combinations of 2,4-D-choline and glufosinate*, Dow AgroSciences LLC, AU 2014/364020, Granted Mar. 9, 2017, http://pericles.ipaustralia.gov.au/ols/auspat/applicationDetails.do?applicationNo=2014364020 (last visited Sept. 12, 2018).

EPA required no toxicity testing of Enlist Duo solutions with specific tank mix partners. EPA nowhere disputes this. Instead, EPA provides a lengthy incantation of tank mixing regulations. ECF 83 at 61-64. Yet those measures do not encompass analysis of increased toxicity from *synergy*. The tests EPA requires for approval of a particular tank mix product simply determine how adding it changes the physical properties of the solution related to spray drift, such as the size distribution of the droplets formed when it is forced through a spray nozzle. ER42. (For example, if more small droplets are formed with the added product, the tank mix will drift further in the wind than Enlist Duo alone. ER40-41.) In contrast, to determine if a tank mix product acts synergistically to increase Enlist Duo's toxicity, biological tests would need to be done with the mixture applied to growing plants. If the mixture caused injury to the plants at lower concentrations than predicted, the current registration would be violated. EPA knows they are different: it required this exact type of plant toxicity testing to determine if there was synergy between glyphosate and 2,4-D. ER1003-06 (requiring testing on seedling emergence and vegetative vigor to determine toxicity endpoints for the 2,4-D and glyphosate combination); ECF 64-1 at 65.

Consequently, tank mixes of glufosinate and Enlist Duo can now be used without any analysis of their likely synergistic effects, as long as such tank mixes

do not exacerbate the unrelated phenomenon of spray drift. There is record evidence that such use is a major part of Dow's commercial plan, and evidence of different and increased toxicity concerns. These foreseeable, intended results are encompassed in the scope of "pesticide" approval that EPA had to consider and address here. 7 U.S.C. § 136(u)(2). EPA's failure to do so violated FIFRA.

V. THE COURT SHOULD VACATE THE REGISTRATION.

The Court should vacate the registration and remand to EPA for compliance with the Court's order. Further supplemental briefing on remedy is unwarranted; vacatur is the express and presumptive remedy here. *See* ECF 64-1 at 65-67. In the interests of judicial efficiency, NFFC Petitioners join the vacatur reply briefing of Petitioner NRDC filed concurrently, with only the following additions.

First, neither EPA nor Dow makes any effort to distinguish this Court's on-point precedent vacating prior pesticide registrations. *Pollinator Stewardship*, 806 F.3d at 532-33; *Nat. Res. Def. Council*, 857 F.3d at 1042. Second, neither do they attempt any rebuttal to NFFC Petitioners' arguments showing FIFRA and ESA violations are serious errors of law for vacatur purposes, ECF 64-1 at 66. Third, their arguments about alleged economic harm to farmers are unsupported, and in reality vacatur would leave farmers with access to many dozens of alternative herbicides, not to mention sustainable, non-chemical weed management tactics.

FER17-19, 49, 13-15. Finally, Dow has the temerity to argue, without any evidentiary support, that vacatur would lead to use of more environmentally harmful herbicides, but many alternatives are far safer, including multiple options that EPA has classified as "reduced risk."[27] Moreover, it is undisputed that absent vacatur, the registration will increase agricultural use of 2,4-D by an astounding 200% to 600% without diminishing glyphosate applications. ER353, ER1102, FER12. Dow's attempt to portray that as somehow *better* for the environment is contrary to the record, science, and common sense.

Respectfully submitted this 14th day of September, 2018.

/s/ George A. Kimbrell
George A. Kimbrell
917 SW Oak Street, Suite 300
Portland, OR 97205
T: (971) 271-7372 / F: (971) 271-7374
Email:gkimbrell@centerforfoodsafety.org

/s/ Paul H. Achitoff
Paul H. Achitoff
Earthjustice
850 Richards Street, Suite 400
Honolulu, Hawai'i 96813

[27] EPA lists 12 "reduced risk" herbicides (none are 2,4-D) registered for use on corn (9), cotton (4) and soybean (4), with three herbicides each registered for two crops, and one for all three. U.S. Envtl. Prot. Agency, *Pesticide Registration: Reduced Risk and Organophosphate Alternative Decisions for Conventional Pesticides*, https://www.epa.gov/pesticide-registration/reduced-risk-and-organophosphate-alternative-decisions-conventional (last visited Sept. 12, 2018).

T: (808) 599-2436 / F: (808) 521-6841
Email: achitoff@earthjustice.org

Counsel for Petitioners National Family Farm Coalition, Family Farm Defenders, Beyond Pesticides, Center for Biological Diversity, Center for Food Safety, and Pesticide Action Network North America

SUPPLEMENTAL ADDENDUM

OF DECLARATIONS

SUPPLEMENTAL ADDENDUM OF DECLARATIONS

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NATIONAL FAMILY FARM COALITION, *et al.*, *Petitioners*, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.*, *Respondents*, and DOW AGROSCIENCES LLC, *Intervenor*.	No. 17-70810
NATURAL RESOURCES DEFENSE COUNCIL, INC., *Petitioners*, v. SCOTT PRUITT, *et al.*, *Respondents*, and DOW AGROSCIENCES LLC, *Intervenor*.	No. 17-70817

DECLARATION OF MARGOT MCMILLEN IN SUPPORT OF PETITIONERS NATIONAL FAMILY FARM COALITION, ET AL.

DECLARATION OF MARGOT MCMILLEN

I, MARGOT MCMILLEN, declare that if called as a witness in this action I would competently testify of my own personal knowledge as follows:

1. I submit this declaration in support of Petitioners Center for Food Safety, National Family Farm Coalition, Family Farm Defenders, Beyond Pesticides, Pesticide Action Network North America, and Center for Biological Diversity in their Petition for Review of the registration of new uses of the herbicide Enlist Duo.

2. I am a resident of 2825 County Road 230, Fulton, Missouri 65251 and own a farm located at 1303 State Road M, Auxvasse, Missouri 65321.

3. I am a member of Missouri Rural Crisis Center (MRCC), a member of the National Family Farm Coalition (NFFC), one of the petitioners in this action. I joined MRCC, because MRCC works to empower farmers and other rural people to preserve family farms, promote stewardship of the land and environmental integrity, and strive for economic and social justice by building unity and mutual understanding among diverse groups, both rural and urban. MRCC is a member of NFFC, because NFFC empowers independent family farmers by reducing the corporate control of agriculture and promoting a more socially just farm and food policy.

4. I am also a member of Family Farm Defenders (FFD), another petitioner in this action. I joined FFD, because FFD supports sustainable agriculture, farm worker rights, animal welfare, consumer safety, fair trade, and food sovereignty. FFD strives to create opportunities for farmers to join together in new cooperative marketing endeavors and to bridge the socioeconomic gap that often exists between rural and urban communities.

5. My farmstead is 160 acres with two of those acres dedicated to growing vegetables. I currently farm lettuce, onions, garlic, kale, chard, tomatoes, peppers, green beans, and potatoes. I also grow hay and have cattle and sheep. My farm is located amongst a mixture of land used for raising grain crops and pasture. The area is almost entirely agricultural.

6. My farm, Terra Bella Farm, has been in operation since 1999. My farm makes approximately $30,000 a year from vegetables. Most of my vegetables are sold to a local brewery and the remainder is sold to a few restaurants in St. Louis. I make another $500-$1,000 from my sheep. The cattle pasture on my farm is rented by another producer.

7. I do not use any herbicides or chemical fertilizers on my farm. We take spent grain from the brewery to use as compost. We also compost our animal waste and get manure and sawdust from a nearby horse barn for compost. Weeds

are dealt with the old-fashioned way–mowing or pulling them out of the ground by hand.

8. I know that the U.S. Environmental Protection Agency (EPA) has recently approved the conditional registration for new uses of Enlist Duo, which contains the active ingredient 2,4-D, on 2,4-D-resistant, genetically engineered corn, soybean, and cotton in thirty-four states, including Missouri. I am aware that 2,4-D is drift-prone and volatile, and can have damaging impacts on certain crops and plants. Because of where my farm is located, even prior to the approval of Enlist Duo's new use on Dow's Enlist corn, soybean, and cotton, I had experienced damage to my farmstead from 2,4-D-use by neighboring farms.

9. In 2013, 2,4-D drift hit my farmstead, killing my grapevines and landscaping plants.

10. In June 2014, my farm was hit again with drift from 2,4-D. I sent samples to the Missouri Department of Agriculture, which investigated the incident. On October, 23, 2014, the Department confirmed that laboratory analysis of a foliage sample collected from my tomato plants detected 2,4-D. According to the Department, weather data indicates the likelihood that the 2,4-D sprayed on my neighbor's farm volatized at some point after the application and moved onto my property. This drift incident cost my farm $25,000 and resulted in a total loss of my tomatoes and peppers.

11. EPA's approval of Enlist Duo for use on 2,4-D-resistant corn, soybean, and cotton injures me economically. Because EPA's approval of Enlist Duo allows 2,4-D to be sprayed more and for longer periods of time during the growing season, I know that I am now at an even greater risk of drift damage. For these reasons, I have been forced to move my tomatoes several hundred feet away from the road bordering my one neighbor's property.

12. As a direct result of EPA's proposal to approve Enlist Duo, I will have to scale back on the amount of crops I farm, since I know that any additional investment to replant new fields would likely result in a significant yield loss from 2,4-D damage. As long as Enlist Duo remains on the market, I will not be able to maximize my acreage for production, and will continue to plant on reduced acreage, rather than investing in replanting or planting out new fields, to reduce the cost of planting and growing crops that will only be damaged by 2,4-D drift.

13. EPA's decision to approve Enlist Duo has injured my ability to expand my farm and grow my business. It is difficult to make "best practice" decisions on where and how to plant my crops when I know they will be affected by volatile chemicals like 2,4-D. Due to the realistic threat of Enlist Duo drift wiping out my farm, I am unable to invest further in my business's growth.

14. EPA's approval of Enlist Duo also injures my vocation by limiting my ability to grow vegetables sustainably. I chose to farm sustainably because I do not

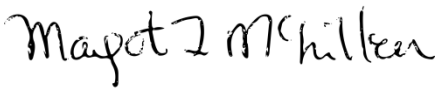
believe in farming with herbicides and other chemicals. Yet as long as Enlist Duo remains approved for use on 2,4-D-resistant corn, soybeans and cotton, I am beholden to a future where I have to plan my farming practices and business around the risk of drift damage from herbicides like Enlist Duo.

15. Managing my business and protecting it from potential damage from herbicides like Enlist Duo has become a major stressor in my life. I could have farmed corn, soybean, and other grains using herbicides, but I chose not to do so because it is not a sustainable way of farming. As a result of the availability of herbicides such as Enlist Duo and their companion genetically engineered corn and soybean, herbicide application on neighboring farms still continues to control and affect how I manage my farm.

16. In sum, EPA's approval of Enlist Duo for new uses on Enlist corn, soybean, and cotton has injured, and will continue to injure, my economic and social interests. Without a court finding that EPA violated its duties in registering Enlist Duo for use on 2,4-D-resistant corn and soybean, the growth of my farm will continue to be adversely affected by the use of Enlist Duo.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 10, 2018, in Fulton, Missouri.



MARGOT MCMILLEN

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

NATIONAL FAMILY FARM COALITION, *et al.*, *Petitioners*, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.*, *Respondents*, and DOW AGROSCIENCES LLC, *Intervenor*.	)	No. 17-70810
NATURAL RESOURCES DEFENSE COUNCIL, INC., *Petitioners*, v. SCOTT PRUITT, *et al.*, *Respondents*, and DOW AGROSCIENCES LLC, *Intervenor*.	)	No. 17-70817

DECLARATION OF ANGELA JACKSON PULSE IN SUPPORT OF PETITIONERS NATIONAL FAMILY FARM COALITION, ET AL.

DECLARATION OF ANGELA JACKSON PULSE

I, ANGELA JACKSON PULSE, declare that if called as a witness in this action I would competently testify of my own personal knowledge as follows:

1. I submit this declaration in support of Petitioners Center for Food Safety, National Family Farm Coalition, Family Farm Defenders, Beyond Pesticides, Pesticide Action Network North America, and Center for Biological Diversity in their Petition for Review of the registration of new uses of the herbicide Enlist Duo.

2. I am a resident of 46516 316th Street, Vermillion, South Dakota 57069.

3. I am a member of Dakota Rural Action (DRA), a member of the National Family Farm Coalition (NFFC), one of the petitioners in this action. I joined DRA, because DRA strives to create a better future for South Dakota's rural communities, family farms, ranches, and main street businesses while preserving natural resources and a clean environment. DRA is a member of NFFC, because NFFC empowers family farmers by reducing the corporate control of agriculture and promoting a more socially just farm and food policy.

4. I currently farm about fifteen acres of corn, soybeans, and grass hay. I also have pasture-raised poultry on my farm. My farm, Prairiesun Organics, is

located in Fairview Township amongst a mixture of land used for raising grain crops and pasture. The township is almost entirely agricultural.

5. All crops grown at Prairiesun Organics are 100% organic. I am proud of our many sustainable farming methods. For example, we mainly use organic fertilizer and no synthetic herbicides. Our farm also uses a number of sustainable practices, including providing natural wildlife habitat, grass buffers for nesting birds, pollinator habitat for honeybees, rainwater collection, composting, and nutrient recycling.

6. Farming and operating an organic farm is extremely challenging, especially since my organic farm is near farmlands growing grain crops like soybean, corn, and wheat, and using farming methods that rely heavily on herbicides. I have no control over the use of such herbicides by my neighbors.

7. I know that the U.S. Environmental Protection Agency (EPA) has recently approved the conditional registration for new uses of Enlist Duo, which contains the active ingredient 2,4-D, on 2,4-D-resistant, genetically engineered corn, soybean, and cotton in thirty-four states, including South Dakota. I am aware that 2,4-D is drift-prone and volatile, and can have damaging impacts on certain crops and plants, including sensitive non-target organically-grown corn and soybeans. Because of where my organic farm is located, even prior to the approval of Enlist Duo's new use on Dow's Enlist corn, soybean, and cotton, I had

experienced damage to my organic crops from 2,4-D-use by neighboring farms. I know that now, for the first time, because of these Enlist Duo crops, 2,4-D will be sprayed over the top of corn and soy and cotton, causing increased drift and at different times of the growing season.

8. Prior to starting Prairiesun Organics, I operated a twenty-acre organic farm in Iowa. In 2010, the entire farm was drifted on and tested positive for 2,4-D and glyphosate, the two active ingredients in Enlist Duo. I lost my organic certification and had to sell the farm. I picked up the pieces,moved my family to South Dakota, and bought another piece of land to start Prairiesun Organics.

9. Unfortunately, the problems with drift have only worsened. In three out of the last eight crop seasons, I have not been able to go to market because my organic crops tested positive for substances linked to drift. Because my organic crops were contaminated with herbicides, including 2,4-D and glyphosate, I again lost my organic certification. In order to regain my certification, the Midwest Organic Services Association (MOSA) required the development and implementation of a costly corrective action plan.

10. Pursuant to the corrective action plan, I expanded the buffers on my farm from thirty feet to eighty feet. I have also installed surveillance cameras, “No Spray Zone” signs on all borders of my property, weather vanes on the north and south border, and a weather station to report weather conditions. I also hired an

environmental consultant to take samples to show that I am not selling contaminated crops. In order to be recertified organic, my farm has to test clean three years in a row. The implementation of the corrective action plan costs about $10,000 per summer.

11. Despite these costly measures, in 2017, my organic soybean field tested positive for 2,4-D and was reduced in size to 5.5 acres. As a result, I turned under 7 acres and harvested only 2.5 acres due to 2,4-D drift on our soybean crop.

12. On July 9, 2018, my farm was drifted on again. I fear that MOSA will once again find my farm in non-compliance with organic standards, which will further delay recertification of my farm.

13. Over the years, I have filed multiple complaints with the South Dakota Department of Agriculture to report drift damage and, through my experience in corn and bean farming, have learned to recognize drift damage from 2,4-D. I test each year for 2,4-D drift before harvest. In 2017, I filed one complaint for drift contamination when 2,4-D residue came up positive on a random sample taken from my soybean field before my beans could go to market. I immediately reported the 2,4-D contamination to the Department but it refused to investigate because it was reported more than thirty days after the application. I would have reported the contamination earlier but was unaware that an airplane had

purportedly sprayed 2,4-D approximately one mile from my farm in the spring-summer timeframe.

14. In addition to my farming experience, I also have experience as an organic inspector and an organic lead auditor. I have worked on equivalency in organics all over the world and have visited hundreds of farms and processing centers over the last twelve years.

15. I have also launched a website (www.righttofarmorganic.org) that is dedicated to agricultural trespass education for organic producers, gardeners, and land owners across South Dakota. The site features a "Citizen Ag Spray Reporting Tool" where farmers can document spray and drift incidents for dissemination to lawmakers to support enhanced legislation surrounding chemical trespass and EPA violations. The site also provides links to other resources where citizens can educate themselves about pesticides, herbicides, and fungicides.

16. EPA's approval of Enlist Duo for use on 2,4-D-resistant corn, soybean, and cotton injures me economically. Because EPA's approval of Enlist Duo allows 2,4-D to be sprayed for a longer period of time during the growing season, and due to my past experience with unavoidable 2,4-D drift damaging my corn, soybeans, and hay, I have been forced to destroy crops and decrease the amount of planted acreage. In light of my past experience with 2,4-D drift damage to my crops and likelihood of increased 2,4-D use over a longer period of time on

2,4-D-resistant corn and soybean, I have had to halt further production and removed acreage to avoid investment into organic corn and soybeans that would just be damaged and lost. In 2017, I removed nine acres from production, of which seven acres were removed due to 2,4-D drift. I have removed these acres from production, even though local stores and my customers continue to demand the products on my farm.

17. As a direct result of EPA's proposal to approve Enlist Duo, I will likely continue to scale back on the amount of organic crops I farm, since I know that any additional investment to replant new fields would likely result in a significant yield loss from 2,4-D damage. As long as Enlist Duo remains on the market, I will not be able to maximize my acreage for organic production, and will continue to plant on reduced acreage, rather than investing in replanting or planting out new fields, to reduce the cost of planting and growing organic crops that will only be damaged by 2,4-D drift. I would estimate that the reduction in planting to avoid drift damage from Enlist Duo has cost my business at least $35,000 in lost organic corn and soybean production.

18. In addition, I had to shut down our chicken operation, Prairiesun Organic Poultry, because I had no organic grains to feed my organic chickens. My farm was the largest certified organic pasture-raised chicken operation in South Dakota before the 2017 drift incident. This loss was over $100,000. I also had to

shut down our certified organic processing plant since I had no chickens to process.

19. My ability to expand my organic farm and grow my business has been injured by EPA's decision to approve Enlist Duo. It is difficult to make "best practice" decisions on where and how to plant my corn and soybeans when I know they will be affected by volatile chemicals like 2,4-D. I am unable to invest further in my business's growth due to the realistic threat of Enlist Duo drift wiping out my organic farm.

20. EPA's approval of Enlist Duo also injures my vocation by limiting my ability to grow organic corn and soybeans sustainably. I chose to farm corn and soybeans sustainably because I do not believe in farming with herbicides. Yet as long as Enlist Duo remains approved for use on 2,4-D-resistant corn, soybeans and cotton, I am beholden to a future where I have to plan my farming practices and business around the risk of drift damage from herbicides like Enlist Duo.

21. The damage caused by 2,4-D drift from other farms in the surrounding area has also hurt my personal relationships with my neighbors. After one drift incident, I sent a letter to one neighbor asking him to stay sixty feet back from my property when he is spraying. In response, this neighbor told me that he will not honor any of my requests, there is no way that I can be "organic," and that I should move. I have sent similar letters to other neighboring farmers, and now many of

my neighbors no longer want to speak to me because they see me as a troublemaker who might report them to the South Dakota Department of Agriculture. Neighboring farms see drift damage to my crops from spraying volatile chemicals, such as 2,4-D-resistant Enlist Duo, on their crops as my problem for starting an organic farm in that area because they were farming conventional corn and soybean first. These farmers do not see it as their responsibility to keep their chemicals to themselves.

22. Managing my business and protecting it from potential damage from herbicides like Enlist Duo has become the biggest stressor in my life. I have already lost one organic farm because of drift damage and now I may lose another. I could have farmed corn, soybean, and other grains using herbicides, but I chose not to do so because it is not a sustainable way of farming. As a result of the availability of herbicides such as Enlist Duo and their companion genetically engineered corn and soybean, herbicide application on neighboring farms still continues to control and affect how I manage my organic farm.

23. In sum, EPA's approval of Enlist Duo for new uses on Enlist corn, soybean, and cotton has injured, and will continue to injure, my economic and social interests. Without a court finding that EPA violated its duties in registering Enlist Duo for use on 2,4-D-resistant corn and soybean, the growth of my organic

farm and my relationships with my neighbors will continue to be adversely affected by the use of Enlist Duo.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 10, 2018, in Vermillion, South Dakota.

ANGELA JACKSON PULSE

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

NATIONAL FAMILY FARM COALITION, *et al.*, *Petitioners*, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.*, *Respondents*, and DOW AGROSCIENCES LLC, *Intervenor*.	)	No. 17-70810
NATURAL RESOURCES DEFENSE COUNCIL, INC., *Petitioners*, v. SCOTT PRUITT, *et al.*, *Respondents*, and DOW AGROSCIENCES LLC, *Intervenor*.	)	No. 17-70817

DECLARATION OF JOHN PECK IN SUPPORT OF PETITIONERS NATIONAL FAMILY FARM COALITION, ET AL.

DECLARATION OF JOHN PECK

I, JOHN PECK, declare that if called as a witness in this action I would competently testify of my own personal knowledge as follows:

1. I am the Executive Director of Petitioner Family Farm Defenders (FFD). I submit this declaration in support of Petitioners Center for Food Safety, National Family Farm Coalition, Family Farm Defenders, Beyond Pesticides, Pesticide Action Network North America, and Center for Biological Diversity (collectively Petitioners') Petition for Review of the registration of new uses of the herbicide Enlist Duo.

2. FFD is a nonprofit grassroots organization made up of farmers, consumers, and others concerned about sustainable agriculture, farm workers' rights, consumer safety, rural justice, animal welfare, fair trade, and food sovereignty. Founded in 1994, FFD has approximately 3,000 predominantly family farmer members in all fifty states, though most are concentrated in the Midwest. FFD exists to create a farmer-controlled and consumer-oriented food and fiber system, based upon democratically controlled institutions that empower farmers to speak for and respect themselves in their quest for social and economic justice. FFD has worked to create opportunities for farmers to join together in new cooperative endeavors, form a mutual marketing agency, and forge alliances with consumers through providing high quality food products while returning a fair

price to farmers. FFD today represents farmers in all states where the U.S. Environmental Protection Agency (EPA) has approved the use of Enlist Duo on soybean, corn, and cotton genetically engineered with resistance to it—the challenged new uses at issue in the present Petition for Review. FFD is an active member organization of the National Family Farm Coalition (NFFC), which is also a petitioner in this action.

3. FFD was among the first national farmer organizations to raise awareness about genetically engineered, pesticide-resistant crops. Beginning in the 1990s, FFD opposed federal approval of genetically engineered crops such as Bt corn, cotton, and potatoes and Roundup Ready corn, soybean, and cotton. FFD also opposed the federal approval of Roundup Ready canola, wheat, sugar beets, and alfalfa because of the concerns about the toxic effects of glyphosate on farmers, farmworkers, livestock, wildlife, and our environment. When it was announced that 2,4-D-resistant crops were being developed for commercialization, FFD joined other national groups in opposing this ever-worsening agrochemical treadmill.

4. FFD and its members have been and will continue to be adversely affected by EPA's registration of the Enlist Duo herbicide for new uses on 2,4-D-resistant soybeans, corn, and cotton. EPA's decision to approve Enlist Duo for new uses harms FFD's members' farms, livelihoods and environment, to the detriment of their personal and economic interests. FFD's members live, farm, and recreate

in many locations where Enlist Duo has been sprayed or will be sprayed. Many of FFD's farmer members who grow vulnerable crops, such as tomatoes, grapes, strawberries, raspberries, cucumbers, squash, watermelon, cantaloupe, and non-2,4-D-resistant corn and soybeans, are at risk of Enlist Duo damage. FFD-member bee keepers are similarly at risk of Enlist Duo damage. Because EPA's registration allows Enlist Duo use in soybean, corn, and cotton states for in-season use, FFD's farmer members will likely adjust their planting season and choice of seed or crop, or implement costly measures such as buffer zones, in an attempt to mitigate or avoid crop damage by Enlist Duo.

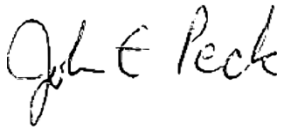
5. Many of FFD's members are actively involved in efforts to reduce the use of pesticides and to preserve the use of non-patented seed crops. FFD's members understand the importance of using conventional, non-genetically engineered seeds, and the need to save their seeds, as vital components of rural life and their way of farming. Because EPA's approved new uses of Enlist Duo on 2,4-D-resistant soybean, corn, and cotton extends the time whereby farmers may suffer Enlist Duo drift damage, many farmers in localities where FFD farmers live and work have no choice but to switch to planting 2,4-D-resistant soybean, corn, and cotton in order to avoid economic losses caused by drift damage to their crops. Consequently, this reduces the local availability of non-genetically engineered seeds since local seed banks have no incentive to sell such varieties due to reduced

demand. Thus, the registration of Enlist Duo has, and will continue to, injure FFD's members' interest and ability to acquire and plant non-genetically engineered seeds, costing them additional time and money in order to locate such seeds.

6. In sum, EPA's decision to register Enlist Duo for use on 2,4-D-resistant corn, soybean, and cotton injures FFD's organizational interests, as well as the economic and personal interests of our members.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 26, 2018, in Madison, Wisconsin.



JOHN PECK
Executive Director

Form 8. Certificate of Compliance Pursuant to 9th Circuit Rules 28.1-1(f), 29-2(c)(2) and (3), 32-1, 32-2 or 32-4 for Case Number 17-70810, 17-70817

Note: This form must be signed by the attorney or unrepresented litigant *and attached to the end of the brief.*

I certify that (*check appropriate option*):

☐ This brief complies with the length limits permitted by Ninth Circuit Rule 28.1-1.
The brief is [ ] words or [ ] pages, excluding the portions exempted by Fed. R. App. P. 32(f), if applicable. The brief's type size and type face comply with Fed. R. App. P. 32(a)(5) and (6).

☐ This brief complies with the length limits permitted by Ninth Circuit Rule 32-1.
The brief is [ ] words or [ ] pages, excluding the portions exempted by Fed. R. App. P. 32(f), if applicable. The brief's type size and type face comply with Fed. R. App. P. 32(a)(5) and (6).

☐ This brief complies with the length limits permitted by Ninth Circuit Rule 32-2(b).
The brief is [ ] words or [ ] pages, excluding the portions exempted by Fed. R. App. P. 32(f), if applicable, and is filed by (1) ☐ separately represented parties; (2) ☐ a party or parties filing a single brief in response to multiple briefs; or (3) ☐ a party or parties filing a single brief in response to a longer joint brief filed under Rule 32-2(b). The brief's type size and type face comply with Fed. R. App. P. 32(a)(5) and (6).

☐ This brief complies with the longer length limit authorized by court order dated [ ]
The brief's type size and type face comply with Fed. R. App. P. 32(a)(5) and (6). The brief is [ ] words or [ ] pages, excluding the portions exempted by Fed. R. App. P. 32(f), if applicable.

☒ This brief is accompanied by a motion for leave to file a longer brief pursuant to Ninth Circuit Rule 32-2 (a) and is **9,969** words or [ ] pages, excluding the portions exempted by Fed. R. App. P. 32 (f), if applicable. The brief's type size and type face comply with Fed. R .App. P. 32(a)(5) and (6).

☐ This brief is accompanied by a motion for leave to file a longer brief pursuant to Ninth Circuit Rule 29-2 (c)(2) or (3) and is [ ] words or [ ] pages, excluding the portions exempted by Fed. R. App. P. 32(f), if applicable. The brief's type size and type face comply with Fed. R. App. P. 32(a)(5) and (6).

☐ This brief complies with the length limits set forth at Ninth Circuit Rule 32-4.
The brief is [ ] words or [ ] pages, excluding the portions exempted by Fed. R. App. P. 32(f), if applicable. The brief's type size and type face comply with Fed. R. App. P. 32(a)(5) and (6).

Signature of Attorney or Unrepresented Litigant: /s/ Paul H. Achitoff

Date: 9/14/18

("s/" plus typed name is acceptable for electronically-filed documents)

9th Circuit Case Number(s) 17-70810, 17-70817

NOTE: To secure your input, you should print the filled-in form to PDF (File > Print > *PDF Printer/Creator*).

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CERTIFICATE OF SERVICE
When All Case Participants are Registered for the Appellate CM/ECF System

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system on (date) 9/14/2018 .

I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

Signature (use "s/" format) /s/ Paul H. Achitoff

****

CERTIFICATE OF SERVICE
When Not All Case Participants are Registered for the Appellate CM/ECF System

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system on (date) .

Participants in the case who are registered CM/ECF users will be served by the appellate CM/ECF system.

I further certify that some of the participants in the case are not registered CM/ECF users. I have mailed the foregoing document by First-Class Mail, postage prepaid, or have dispatched it to a third party commercial carrier for delivery within 3 calendar days to the following non-CM/ECF participants:

Signature (use "s/" format)