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UNITED STATES DISTRICT COURT

DISTRICT OF ARIZONA

TUCSON DIVISION

CENTER FOR BIOLOGICAL DIVERSITY, et al.,

Plaintiffs,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA), et al.,

Defendants,

and

BAYER CROPSCIENCE LP, et al.,

Intervenor-Defendants.

Case No. CV-20-00555-TUC-DCB

INTERVENORS' MOTION FOR SUMMARY JUDGMENT, SUPPORTING MEMORANDUM, AND OPPOSITION TO PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT

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(Oral Argument Requested)

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INTRODUCTION

Dicamba has been sold and used in U.S. agriculture for decades, and is capable of controlling highly problematic weeds resistant to other pesticides. Intervenor-Defendants (Intervenors) have specially formulated their dicamba products, XtendiMax®, Engenia® and Tavium®, so that they are less volatile and less likely than other forms of dicamba to move off an agricultural field when applied. XtendiMax and Engenia have been available for use over our nation's soybean and cotton crops for six years; Tavium has been available for four years. Throughout that period, yield for U.S. soybean and cotton crops has materially improved: nothing in any official yield data for any of the States where soybean and cotton are grown suggests widespread harm to crop yield or productivity from off-target movement of dicamba. *See infra* at 28.

The dicamba pesticides at issue in this case are registered for use only by trained and licensed "certified applicators" in 34 States. Although each of these States has authority under federal and state law to address pesticide-related harms, including by banning use if needed, *not one* has banned these products. Indeed, as the record demonstrates, State after State has concluded that these specialized dicamba pesticides are a critical tool for agriculture and should remain on the market. And although Plaintiffs imply that Intervenors' dicamba pesticides threaten to eradicate endangered plants or other species, there is *not one* report in the record of harm to even one endangered plant or animal over the six years in which these pesticides have been used, much less harm on a level that could threaten any protected species.

Plaintiffs' *merits* arguments are premised on two fundamental errors of administrative law. ***First***, this Court can only review EPA's registration decisions based on the information EPA had before it in the record when it made those decisions. *Infra* at 21-22. But as shown below, most of Plaintiffs' merits arguments—including all arguments relating to pesticide applications in 29 of the 34 States at issue—instead rely on *post-decisional* extra-record material, urging the Court to second guess EPA's reasoning in hindsight, based on information not before EPA when it registered these products. That

extra-record information must be excised from Plaintiffs' arguments. Instead, the proper record before this Court includes:

- Records from dozens of scientific field tests conducted by independent academic experts and others supporting registration of Intervenors' products, SOF ¶¶ 101-05;
- EPA's scientific modeling analyzing available evidence from a host of sources and supporting the agency's technical conclusions, SOF ¶ 101-05, 144;
- Input from the U.S. Department of Agriculture (USDA), agricultural experts, farming organizations, and others explaining why these products are needed, SOF ¶¶ 69, 87-99;
- Data supporting the efficacy of new measures to further reduce tank-mix volatility, including the use of specialized volatility reduction additives (VRAs), SOF ¶¶ 153-57;
- EPA analyses and discussion directly addressing a range of specific concerns raised in prior Ninth Circuit litigation, SOF ¶¶ 106-41; and
- Statistical evidence showing yield gains to soybean and cotton crops, and no pattern of any widescale yield losses in any location, SOF ¶¶ 38-39, 41.

With that record, each of the 2020 registration decisions (2020 Registrations) easily survives the Administrative Procedure Act's deferential "arbitrary and capricious" standard of review, as does EPA's 2020 "no effect" determination under the Endangered Species Act (ESA). If the specialized EPA labels applicable in five other States (which were the product of targeted amendments in 2022 and 2023) can be challenged here, the record also demonstrates that EPA acted appropriately, adding *further* restrictions after reviewing submissions and consulting with officials in each of the specific States at issue.

Plaintiffs' ***second*** fundamental error is a failure to recognize how the principal governing statute, and EPA's related regulations, apply in this context. To understand Plaintiffs' flub, it is necessary to examine how Congress structured the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). As explained below (at 21-22), Congress and EPA created a detailed procedure for cancelling or suspending a pesticide registration if *post-registration* information so requires. In short, any interested person may petition EPA to evaluate cancelling a pesticide registration based on *new* data or information. EPA must

seek and consider public input, must consult with USDA, and cannot cancel a registration if further restrictions on the pesticide's uses can instead address any concerns. If EPA determines in its scientific judgment to reject that petition, the petitioner can *then* seek judicial review of EPA's rejection.

This petition process is how Plaintiffs *must* proceed now *if they think that post-registration information merits a change in a prior EPA registration decision.* Plaintiffs know all about this EPA process—they have previously filed exactly this type of petition, and have filed suit in federal court when EPA did not take the action they desired. *See infra* at 22 & n.13. Plaintiffs attempt to remedy their error with this conceit: They pretend that EPA already expressly considered and rejected registrant requests to amend Intervenors' labels in all 34 States (not just five), and that this somehow created a new EPA agency action in all 34 States that can now be challenged. But as the record demonstrates, *this did not happen*. Only five States were the subject of the amendments, not all 34.

In short, Plaintiffs seek an impermissible shortcut, evading a statutory and regulatory process before EPA and instead attempting to place this Court in an untenable position. Plaintiffs are asking this Court to assess and decide, in the first instance, complex scientific and policy questions based on a record that spans over 200,000 pages of technical analyses that, if printed and stacked would be dozens of feet high. But that is EPA's job. Only after EPA has completed its job may a court review and assess (with appropriate technical deference) EPA's determinations.

Were this Court to reach any conclusion in Plaintiffs' favor on any merits issue, the Court would have multiple options to consider in fashioning an appropriate remedy.[1] The Court need not, and should not, reflexively enter any comprehensive *vacatur*. Perspective is important. Every State where Intervenors' pesticides are used has evaluated those uses, and conducted detailed reviews and/or investigations of any complaints of dicamba injury. Not one of the 34 States has concluded that Intervenors' low-volatility dicamba products

[1] This Court's briefing order, ECF No. 119, does not provide for separate briefing and consideration of potential remedies for any violation of law by Defendant from briefing on the merits of summary judgment.

should be removed from the market. Indeed, every State supports their continued use because the benefits of this technology in preventing dramatic yield loss from weeds outweigh any risks. *See infra* at 10, 25-27. Plaintiffs have not given this Court the whole picture. Take, for example, Plaintiffs' allegations of high incident numbers in Arkansas. *See* PSOF ¶¶ 39, 77, 92, 99, 112, 122, 130, 160, 171. After investigating alleged incidents in 2017, Arkansas's Plant Board investigators determined that only a small portion of those complaints (roughly 17%) can actually be linked to label-compliant applications of any of the pesticides at issue here and an even smaller percentage was potentially attributable to any of these pesticides in 2020 investigations. *See infra* at 29. Against that backdrop, the Arkansas's Plant Board specifically voted to *maintain* access to these products. Similarly, Plaintiffs fail to acknowledge that an individual on whom they repeatedly rely (Professor Bradley) has indicated that, even in cases where dicamba is misused, moves off a field, and produces some noticeable symptomology of exposure in a nearby crop like soybeans, the visual symptomology does not often result in *any* yield loss. *Infra* at 19. This is true even though soybeans are known to be the most sensitive to dicamba of all crops. The pesticide labels here are designed to prevent movement off field, but even if there is visual symptomology, there is usually no genuine harm.

If the Court finds that EPA acted erroneously, *remand without vacatur* would be the most appropriate remedy because vacating the 2020 Registrations would cause significant harm and disruption to our agricultural economy in the coming seasons. If EPA needs "to offer better reasoning" in support of its registration decision, it can do so on remand. *Nat'l Fam. Farm Coal. v. EPA*, 966 F.3d 893, 929 (9th Cir. 2020) (*Enlist*). Working with state authorities, EPA has many tools at its disposal to revise labels to address particular concerns in particular locations on remand. *Infra* at 29-30.

If the Court were to disagree that *remand without vacatur* is appropriate (it should not), *partial* vacatur must be considered. The Court should not act with a sledgehammer that harms agriculture nationwide when it could act with a scalpel instead, carefully limiting any remedy to those geographies where the Court might believe that issues have

arisen. *Id.* *Vacatur*, *partial vacatur*, and *remand without vacatur* are equitable remedies, and must be narrowly tailored to avoid unnecessary harm. Plaintiffs are wrong that vacatur is somehow automatic in this type of case.

In short, Plaintiffs are inappropriately asking this Court to do something which would have disastrous consequences for U.S. farmers. *Infra* at 25-27. The Court should reject Plaintiffs' hyperbole and grant summary judgment to Federal Defendants and Intervenors. Intervenors move for summary judgment based on this Memorandum, Intervenors' Statement of Facts and supporting documents, and declarations addressing potential remedies in this suit.

LEGAL AND FACTUAL BACKGROUND

I. THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT

FIFRA prohibits the sale or distribution of pesticides that have not been registered by EPA. 7 U.S.C. § 136a(c). EPA will register a pesticide only if it determines that the product "will perform its intended function without unreasonable adverse effects on the environment." *Id.* § 136a(c)(5)(C). That requires EPA to engage in cost-benefit analysis, "taking into account the economic, social, and environmental costs and benefits of the use of any pesticide." *Id.* § 136(bb). When EPA registers a pesticide, it approves a legally binding label that specifies how the product may be used. SOF ¶¶ 29-31.

FIFRA also preserves a substantial role for States. States "may regulate the sale or use of any federally registered pesticide," including banning its use, as long as the State "does not permit any sale or use prohibited [under FIFRA]" or "impose or continue in effect any requirements for labeling or packaging in addition to or different from those required under [FIFRA]." 7 U.S.C. § 136v(a), (b). A State "ha[s] primary enforcement responsibility for pesticide use violations" under FIFRA, subject to certain requirements. *Id.* § 136w-1(a).

A pesticide product remains registered unless EPA cancels it pursuant to FIFRA Section 6. If it appears that a pesticide "causes unreasonable adverse effects on the environment," then EPA may initiate proceedings to determine whether the registration

should be cancelled. *Id.* § 136d(b). "[A]ny interested person" may petition EPA to initiate this process. 40 C.F.R. § 154.10; 7 U.S.C. § 137n(a) (providing for judicial review).

Recognizing the potentially significant impacts on agriculture, Congress was very specific about the process for cancelling the registration of a pesticide. And if EPA proposes to cancel a registration, any stakeholder, including agricultural interests and state regulators, have the right to object and request a public administrative hearing. 40 C.F.R. §§ 164.20, 164.22. EPA must publish in the Federal Register a Notice of Intent to Cancel, with its reasoning, and any objections received. *Id.* § 164.8. In considering cancellation, EPA must "take[] into account the impact . . . on the agricultural economy," refer the matter to the Secretary of Agriculture and a Scientific Advisory Panel for comment, and must publish any comments received and EPA's response. 7 U.S.C. §§ 136d(b)(2), 136w(d). If EPA moves forward to cancel under Section 6, EPA must again carefully "take[] into account the impact . . . [on] prices of agricultural commodities, retail food prices, and otherwise on the agricultural economy," and must "consider restricting a pesticide's use . . . as an alternative to cancellation." *Id.* § 136d(b)(2). FIFRA also requires EPA to review every registered pesticide every 15 years to ensure that it continues to satisfy the standard for registration. *Id.* § 136a(g)(1)(A).

II. THE ENDANGERED SPECIES ACT

The ESA requires that agencies "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species." 16 U.S.C. § 1536(a)(2). Each agency must make its own determination if "the action 'may affect' an endangered or threatened species or its critical habitat," using "the best scientific and commercial data available." *Defs. of Wildlife v. Zinke*, 856 F.3d 1248, 1252 (9th Cir. 2017); 16 U.S.C. § 1536(a)(2). Only if an agency concludes that an action may affect a protected species or critical habitat is it required to consult with the Fish and Wildlife Service and the National Marine Fisheries Service. 16 U.S.C. § 1536(a)(2); *Defs. of Wildlife*, 856 F.3d at 1252. If an agency "concludes that a

proposed action will have *no effect* on a listed species, it is under no obligation to consult with the Services." 73 Fed. Reg. 76,272, 76, 280 (Dec. 16, 2008) (emphasis added).

III. INTERVENORS' DICAMBA PRODUCTS

Soybean and cotton farmers in 34 States—and, by extension, their consumers—depend upon the products Plaintiffs challenge here to maintain and increase yields by controlling a wide variety of weeds—particularly weeds that have become resistant to other herbicides such as glyphosate. SOF ¶¶ 1-23. Farmers and agricultural organizations across the U.S. attest that dicamba herbicides are a critical tool for fighting these resistant weeds, which can cut crop yields in half. SOF ¶ 91. The pesticides at issue in this case are low-volatility forms of dicamba, formulated to substantially reduce dicamba's potential to move off field after application. *See* SOF ¶¶ 24-28, 32-37. The labels for these pesticides also mandate very specific application requirements, which make the products far less likely to move off field than other forms of dicamba. SOF ¶¶ 78-86 (describing restrictions).

IV. PERIODIC LABEL AMENDMENTS

EPA and Intervenors have long proven responsive to potential concerns. In 2017 and 2018, EPA worked with stakeholders to implement important changes, including classifying the products as "restricted use" so they could be used only by specially trained certified applicators. SOF ¶¶ 44, 51-56. In addition, applications were allowed only from one hour after sunrise until two hours before sunset to reduce the potential for inversions during application, and a 57-foot omnidirectional buffer (in addition to an already-required 110-foot downwind buffer) was required in counties where endangered species are present. SOF ¶¶ 57-58. Many of these changes were made after a USDA survey conducted during the initial over-the-top registration period suggested that dicamba pesticides may have moved off target and caused symptomology on up to 4% of U.S. soybean fields. SOF ¶ 115. While U.S. soybean yield in 2017 and 2018 was robust and did not suggest any widespread harm, *see* SOF ¶¶ 38-41, Intervenors Bayer and BASF nevertheless took action to strengthen label restrictions. SOF ¶¶ 44-47, 53-59, 80, 231-52. The highest year of reported complaints about possible dicamba movement off fields was 2017. SOF ¶¶ 42-

43, 121. Data from multiple sources show considerably fewer reports of potential off-target dicamba movement in most States in subsequent years. SOF ¶¶ 115, 119-23, 280.[2]

In 2020, the Ninth Circuit vacated the 2018 approvals for XtendiMax and Engenia (but not Tavium, which was not involved in that case). The court found that EPA had failed to sufficiently address and explain its response to certain record evidence in its decision documents. *Nat'l Fam. Farm Coal. v. EPA*, 960 F.3d 1120 (9th Cir. 2020) (*NFFC*); SOF ¶¶ 64-68. EPA then issued an "existing stocks" order under FIFRA, allowing both pesticides to be used through the 2020 growing season. At that point, one of the Plaintiffs here, Center for Food Safety (CFS), asked the Ninth Circuit to invalidate the "existing stocks" order and order the products removed from the market immediately, *i.e.*, during the summer growing season when farmers were dependent on the products. The Ninth Circuit refused, and the dicamba products continued to be used that season in accordance with the terms of EPA's order. *See* Order, *Nat'l Fam. Farm Coal. v. EPA*, No. 19-70115 (9th Cir. June 19, 2020), ECF No. 163; *see also* SOF ¶¶ 69-75.

Although they were vacated, the 2018 registrations were set to expire on December 20, 2020 by their own terms. For months in advance, Intervenors had been submitting, and EPA had been analyzing, information supporting new registrations. In October 2020, EPA issued new registrations for XtendiMax and Engenia with further significant use restrictions. SOF ¶¶ 60-63, 76. The new registrations required for the first time that applicators use a new measure to further reduce volatility of the pesticides: adding a VRA to the spray tank. SOF ¶¶ 78-80. The registrations also materially increased spray buffer distances, from a 110-foot downwind buffer to a new 240-foot downwind buffer, and also required 310-foot downwind buffers in counties where endangered species are present. SOF ¶ 80. And the new registrations imposed—for the first time—nationwide calendar cutoff dates for applications (June 30 for soybeans; July 30 for cotton), which reduced the

[2] The USDA survey was conducted when reports of potential off-target movement were near their highest. SOF ¶ 115. The survey likely exaggerates incidents; it does not record actual harm. SOF ¶ 284. Four percent appears to be the highest estimate of complaints from any source.

average temperature during applications and thus reduced the potential for volatilization. *Id.* With these new restrictions, EPA approved XtendiMax and Engenia for a five-year term and extended the registration of Tavium for the same period. SOF ¶¶ 76-77.

EPA's 2020 Registrations were based on a voluminous new record. For example, the 2020 Ecological Risk Assessment relies on at least 15 sources (including new field studies conducted by independent academics) *that post-date the 2018 registration decision*; the 2020 report assessing incidents and impacts to users and non-users from the proposed registrations relies on at least 98 new sources; and the 2020 Soybean Benefits Assessment and Cotton Benefits Assessment rely on at least 35 and 31, respectively. SOF ¶ 102-04.

A week after the 2020 Registrations, farmers across the United States, including soybean farmers in the Upper Midwest and cotton farmers in the South, filed suit in D.D.C., alleging that EPA's new application restrictions were now *too restrictive*. *See* Compl., *Am. Soybean Ass'n v. EPA*, No. 20-cv-3190 (Nov. 4, 2020) (the "D.D.C. Action"), ECF No. 1. They recognized the key role Intervenors' products play in agriculture, and emphasized that "[w]ithout Dicamba Products in their arsenal, many farms would be largely defenseless in their fight against weeds." D.D.C. Action, ECF No. 50 ¶ 82.

Nearly two months after the farmers filed their challenges, Plaintiffs filed this lawsuit and a protective petition in the Ninth Circuit challenging the registration orders. *See* ECF No. 1-6; Pet. for Review, No. 20-73750, *Nat'l Fam. Farm Coal. v. EPA* (9th Cir. Dec. 21, 2020). After their Ninth Circuit petition was transferred to the D.C. Circuit, Plaintiffs moved to voluntarily dismiss that petition, signaling that they would seek to litigate these issues only in their preferred Ninth Circuit forum.

Over the past four years, there have been few or no complaints of over-the-top dicamba incidents in the large majority of the 34 States where Intervenors' products are registered. SOF ¶¶ 118-24. Although EPA adopted the highly conservative assumption in performing its FIFRA cost-benefit analysis that incidents might be underreported by up to 25-fold, *there is no proof of widespread underreporting*. *See infra* at 14. In fact, numerous States have pointed out that EPA has significantly overestimated the number of incidents.

See infra at 15; *see also* SOF ¶¶ 221-24. And in the handful of States where there were higher reports of potential off-target movement, Intervenors consulted with state authorities to address any concerns. In advance of both the 2022 and 2023 growing seasons, Intervenors sought further label restrictions for five particular States to address those reports. SOF ¶¶ 230-31, 247-49. In 2022 EPA approved amendments providing: A June 20 application cutoff for **Iowa**; a June 12 application cutoff in **Minnesota** south of I-94 and June 30 north of I-94; and no application in any part of Minnesota when the forecasted temperature exceeds 85º F. SOF ¶¶ 234-36. And in 2023, EPA approved label amendments providing: A cutoff of June 12 or first square growth stage for dicamba-tolerant (DT) cotton and June 12 or V4 growth stage for DT soybean in **Iowa**, **Illinois**, and **Indiana**; and a June 20 cutoff for **South Dakota**, as recommended by the State. SOF ¶¶ 247-52, 265. It is simply untrue that EPA considered and rejected amendments that would apply in the 29 other States where these products are registered. SOF ¶¶ 253-57.

In approving the 2023 amendments, EPA had data regarding the successful agricultural season in Minnesota in 2022 with a similar restriction in place. *See* SOF ¶¶ 237-40, 242-47. [redacted] EPA's approval explained that the 2023 amendments would have the effect of ensuring that applications are made at lower temperatures, when volatilization of dicamba is less likely. SOF ¶¶ 249-50, 260-64. This conclusion was based on the analysis of temperature-related volatility that EPA had conducted in 2020. *See infra* at 23-24. The earlier application cutoff date imposed by those 2022 and 2023 amendments would also necessarily reduce the number of dicamba applications in those States. SOF ¶ 265.

Not one of the 34 States where dicamba has been utilized is taking or recommending any action to remove Intervenors' products from the market. *See* SOF ¶¶ 94, 221, 232, 252. Just the opposite. Multiple States have affirmatively supported continued use of the products in submissions to EPA, and explained the products' importance to local agriculture. SOF ¶ 94. States have also specifically contested several of the factual

assertions now relied on by Plaintiffs in this litigation. SOF ¶ 221. There is no information in the record indicating that any endangered or threatened plant or animal has been harmed by Intervenors' products at any point during the six years in which they have been applied. SOF ¶ 177. Instead, Plaintiffs purport to rely on declarations by Clauser and Bradley as showing "overlap" between critical habitat and cotton and soybean fields which, even if accurate, fall well short of establishing any actual harm.[3] In contrast, the record contains voluminous information showing material harm to agriculture if Intervenors' products were removed from the market. SOF ¶¶ 69, 88-100. Indeed, misuse of other pesticides (including higher volatility formulations of dicamba or other auxins) has been repeatedly identified as a cause of reports that Plaintiffs attribute to Intervenors' products. SOF ¶ 48. EPA and States have enforced against such unlawful uses,[4] and Intervenor Bayer brought multiple lawsuits against applicators who illegally applied other, more volatile dicamba formulations over-the-top of its specialized dicamba tolerant soybean seed. SOF ¶¶ 49-50.

EPA is currently conducting its statutorily-mandated periodic review of all dicamba products, including those with higher volatility, and may impose further restrictions on all these other forms of dicamba in the near future.[5] But, perversely, Plaintiffs here only ask the Court to vacate the lower-volatility, highly restrictive dicamba registrations.

Intervenors have submitted four declarations for the purpose of addressing potential remedies in this suit. The declarations describe the significant harm to agriculture from

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[3] Frank Decl. ¶¶ 6-40. After representing to the Court they would forego expert witnesses for their ESA claims, Plaintiffs have filed declarations from witnesses claiming endangered species expertise in an effort to support their merits arguments. ECF 155-1 at ADD26-91 (Clauser, Bradley, and Donley declarations). Intervenors are submitting declarations to support their remedy argument (Dr. Moore, Dr. Sunding, Dr. Griffin, and Mr. Hays), to respond to inaccurate assertions by proposed *amicus* Dr. Mortensen (Dr. Moore and Dr. Griffin), and to respond to Plaintiffs' declarations (Ms. Frank).

[4] *See, e.g.*, EPA, EPA Fines Pesticide Applicator for Violations of Federal Pesticide Law on Kansas Farms (Nov. 10, 2021), https://www.epa.gov/newsreleases/epa-fines-pesticide-applicator-alleged-violations-federal-pesticide-law-kansas-farms#:~:text=LENEXA%2C%20KAN.,inconsistent%20with%20the%20products%27%20labeling.

[5] *See* 87 Fed. Reg. 50, 854; 7 U.S.C. § 136a(g). After reviewing public comments, EPA plans to issue a proposed interim decision. EPA, *EPA Makes Draft Risk Assessments Available for Dicamba as the Next Step in the Registration Review Process* (Aug. 18, 2022), https://www.epa.gov/pesticides/epa-makes-draft-risk-assessments-available-dicamba-next-step-registration-review-process.

the remedy Plaintiffs seek, including severe agronomic implications and inability to effectively control weeds that threaten significant yield losses. *See* Griffin Decl. ¶¶ 21-26; Sunding Decl. ¶¶ 66-71; Moore Decl. ¶¶ 91-106.[6] Vacatur would also cause significant disruption for growers who necessarily make crop, cultivation, and purchasing decisions several months or years in advance of any growing season. Griffin Decl. ¶ 26; *see also* SOF ¶ 314.

STANDARD OF REVIEW

This Court reviews EPA's decisions on pesticide registrations pursuant to 7 U.S.C. § 136n(a) under the APA's highly deferential arbitrary and capricious standard. *See Friends of Animals v. EPA*, 383 F. Supp. 3d 1112, 1120 (D. Or. 2019); 5 U.S.C. § 706. The same deferential standard applies to review under the ESA, which includes review of EPA's definition of the action area and its "no effect" and no critical-habitat modification determinations. *Enlist*, 966 F.3d at 923.

When it comes to scientific determinations that fall within an agency's technical expertise, a court's review is at its "most deferential," and a court cannot substitute its judgment for the "judgment of the agency." *Helping Hand Tools v. EPA*, 848 F.3d 1185, 1199 (9th Cir. 2016). "[A]n agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive." *Lands Council v. McNair*, 537 F.3d 981, 1000 (9th Cir. 2008) (en banc).

ARGUMENT

I. VOLUMINOUS EVIDENCE IN THE RECORD DEMONSTRATES THAT EPA'S 2020 REGISTRATION DECISIONS WERE NOT ARBITRARY AND CAPRICIOUS

In the time leading to EPA's approval of the new XtendiMax and Engenia registrations and extension of the Tavium registration on October 31, 2020, EPA had been

[6] Unlike review of an agency decision on the merits, courts may and routinely do look to non-record evidence and declarations when considering potential harms from vacating an agency action. *See, e.g.*, *Friends of Animals v. Williams*, No. 21-2081, 2022 WL 3714226, at *8 (D.D.C. Aug. 29, 2022); *N. Plains Res. Council v. U.S. Army Corps of Eng'rs*, 460 F. Supp. 3d 1030, 1037 (D. Mont. 2020); *Sierra Forest Legacy v. Sherman*, 951 F. Supp. 2d 1100, 1106-08 (E.D. Cal. 2013).

receiving and reviewing scientific submissions. *See* SOF ¶ 63. These materials included new field studies conducted by independent academic experts and registrants showing the effectiveness of EPA's buffers, SOF ¶ 180-82; low tunnel studies by registrants and academics, SOF ¶ 105; and a simplified label, SOF ¶¶ 108-12. And EPA specifically considered new measures to address dicamba volatility, including calendar cutoff dates to restrict use to earlier in the season when temperatures are lower as well as the new requirement of VRAs. SOF ¶¶ 80, 154-55. EPA relied on extensive new data showing the efficacy of VRAs to significantly reduce volatility. SOF ¶¶ 150-58. EPA also specifically considered, as required by statute, the benefits of the pesticides, highlighted in new input from USDA, States, and growers regarding the importance of the products to American agriculture, SOF ¶¶ 69, 72-75, 88-100, 115-28, and data showing continued increasing yield, SOF ¶¶ 38-41. EPA also had before it a new technical modeling assessment, which analyzed the significantly expanded application buffer distances, calendar cutoffs and VRAs. SOF ¶ 199. EPA made its technical decision after considering all of this scientific information, which is all properly in the administrative record for the 2020 Registrations.

EPA also carefully reviewed the June 3, 2020 Ninth Circuit decision and explicitly addressed each instance where the court had concluded that EPA had previously failed to adequately explain its reasoning.

Label complexity: Although the Ninth Circuit concluded that EPA had not adequately addressed concerns regarding the *complexity of the 2018 labels* for Bayer's and BASF's products, EPA has now fully addressed that issue. Since 2018, both companies have substantially simplified their labels. SOF ¶¶ 109-10. For example, Bayer's 2020 label is less than half the length of the 2018 label. SOF ¶ 110. The 2020 Registrations also include *easy-to-follow calendar cutoff dates*, SOF ¶ 111, and require an *enhanced training program* for the expert certified applicators who use the products, SOF ¶ 80. Plaintiffs have made no effort to show how these labels are beyond the understanding of those certified experts who employ these products, or even to compare these labels with those for many other pesticide products that have similarly detailed requirements. On the

contrary, a national farming organization submitted information to EPA demonstrating that applicators *are able to comply* with the label. SOF ¶ 114. This is exactly the type of technical judgment on which EPA is entitled to deference. Plaintiffs deceptively point (at 13) to two documents that they allege show EPA failed to address label complexity. But both documents simply capture *early* discussions in the EPA process; later discussions resulted in label changes that EPA deemed sufficient to address this issue. CSOF ¶ 109.

Economic costs: The Ninth Circuit also identified EPA's prior 2018 failure to sufficiently examine how dicamba off-target movement could have imposed *economic costs* on other farmers. But the Ninth Circuit acknowledged that any "reduction in yield caused by the damage[]"—a theoretical measure of the economic damage—could not be "calculated with precision." *NFFC*, 960 F.3d at 1138; *see also Ass'n of Pac. Fisheries v. EPA*, 615 F.2d 794, 809 (9th Cir. 1980) ("pinpoint precision" is not required for cost-benefit analysis when inputs are "incapable of precise quantification[]"). Instead, the Ninth Circuit faulted EPA for "substantially understat[ing]" the risk of economic impacts, and for not "admit[ting] that there was any damage at all." *NFFC*, 960 F.3d at 1138, 1139.

In the 2020 Registrations, EPA followed the Ninth Circuit's guidance and reasonably considered risks and potential costs of off-target movement. EPA (1) took a highly conservative view that credited even uninvestigated alleged incidents of dicamba off-target movement, and (2) went even further by assuming, for purposes of its FIFRA analysis, that these incidents were underreported. *See* SOF ¶ 116. EPA assumed that, "the magnitude of underreporting" could be "approximately 25-fold." *Id.* This assumption, frequently cited by Plaintiffs, is a faulty extrapolation based on USDA's 2018 Soybean Agricultural Resource Management Survey (ARMS), which predated many of the later label restrictions that further mitigated potential off-target movement. SOF ¶¶ 115-17. And even that 2018 survey, conducted *when reported incidents were much higher than current reports*, found that soybean farmers reported they observed visual symptomology on *less than* 4% of fields in 2018. SOF ¶¶ 115-16, 280, 284.

Despite these highly conservative assumptions, EPA concluded that the "benefits of

use of the pesticide[s] outweigh the risks." SOF ¶ 128. It did so, in no small part, because the new "required control measures for these uses" would substantially address off-target movement, and owing to the products' substantial "benefits." *Id.* EPA did not fail to analyze this issue; to the contrary, it assumed the potential for off-target movement might be worse than any available data had shown, and still concluded, pursuant to FIFRA, that benefits of Intervenors' products outweighed the risks. *Id.*

EPA also carefully explained what it could and could not calculate from available data. For example, its conclusion that alleged reports of damage are not evidence of yield loss was amply supported by data demonstrating that moderate visual symptomology from dicamba exposure does not equate to yield loss. SOF ¶ 191; *see* ¶¶ 188-90 (yield losses for soybean crops from dicamba exposure only tend to occur with 40% or more visual symptomology). That judgment was not arbitrary or capricious. *See, e.g.*, *Advocs. for Highway & Auto Safety v. Fed. Motor Carrier Safety Admin.*, 41 F.4th 586, 607 (D.C. Cir. 2022) ("[B]alancing conflicting evidence is the agency's job, not ours . . . .").

Rather than evaluating what was actually before EPA in 2020, Plaintiffs rely heavily on EPA's extra-record *post-decisional* December 21, 2021 memorandum. As explained *infra* at 21-22, none of this material can properly be considered in reviewing the 2020 Registrations. And, even if it could, the memorandum itself acknowledges that the data it identifies may be *double*-counted. SOF ¶¶ 218-20, 225-30. Indeed, multiple States have raised serious concerns with the data cited in that memorandum, suggesting that EPA materially exaggerated the number of incidents of off-target movement. *See* SOF ¶¶ 221-24 (addressing letters from States identifying *double* or *triple* counting of complaints); *infra* at 28-29. And, in any event, the memorandum showed few or no incidents in many States where Intervenors' products are registered. *See* SOF ¶¶ 225-29.

Anticompetitive impacts: The Ninth Circuit also indicated that EPA had not sufficiently considered the potential *anticompetitive impacts* of its 2018 registration decision. As part of the 2020 Registrations, EPA considered this issue explicitly and reasonably explained why such concerns do not undermine EPA's conclusion. SOF ¶ 129.

EPA acknowledged that hypothetical defensive planting of DT seeds, in the extreme, could raise concerns about monopoly power. SOF ¶ 130. But EPA found there "is little to no ability for firms offering DT technology to exert monopoly power," given "the expanding number of competing herbicide tolerant options." SOF ¶ 136.[7] Although the Ninth Circuit pointed to a sharp jump from 2017 to 2018 in use of DT seeds as an indication that they were on their way to monopoly status, *NFFC*, 960 F.3d at 1142, EPA considered new information in 2020: between 2018 and 2019, the percentage of DT soybean and cotton seeds planted remained flat, rather than increasing. SOF ¶ 134. Instead, a competing pesticide, 2,4-D, gained a very substantial market share. SOF ¶¶ 135, 216; *cf. Citizens Telecomms. Co. of Minn. v. FCC*, 901 F.3d 991, 1010 (8th Cir. 2018).[8] Plaintiffs' position here is ironic, given that the *vacatur* remedy they are seeking in this case would leave *one* principal replacement product, 2,4-D—a pesticide sold by Intervenors' competitor, which Plaintiff CFS falsely alleges will harm endangered species. SOF ¶¶ 216-17.

Social Strife: The Ninth Circuit also previously faulted EPA for failing to consider the potential for "*social strife*" in the agricultural community. *NFFC*, 960 F.3d at 1143. As part of the 2020 Registrations, EPA explicitly considered this issue, but decided that these unquantifiable social costs did not outweigh the benefits of over-the-top dicamba. SOF ¶¶ 137-41. EPA reasonably concluded that the new use restrictions included in the 2020 low-volatility dicamba registrations would reduce the possibility of off-target drift and thus mitigate potential social strife previously linked to dicamba applications. SOF ¶ 140. EPA also concluded that any "social strife" now existing could worsen if EPA eliminated over-the-top applications of these pesticide products. This is because dicamba tolerant seed would likely remain available, and the incentive to use older, much more volatile formulations of dicamba could increase off-target movement. SOF ¶ 139.

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[7] *See also* https://www.epa.gov/ingredients-used-pesticide-products/registration-enlist-one-and-enlist-duo#regulate (discussing registration of Enlist for use over seed that is genetically modified to be tolerant of Enlist herbicides).

[8] It is far from clear that FIFRA supplies EPA with authority to address any competition concerns. To the extent such concerns could exist, FTC and DOJ are specifically empowered to deal with such issues. *See, e.g.*, 15 U.S.C. §§ 2, 45; 28 C.F.R. § 0.40. *See* https://www.justice.gov/atr/about-division/transportation-energy-and-agriculture-section.

EPA also properly addressed other issues Plaintiffs now raise.

Runoff: EPA considered the risks to non-target plants from runoff and concluded that new label-control measures reduced the risk. SOF ¶¶ 142-43; *see* Pls.' Mot. at 16-17.[9] Among other things, EPA reviewed a new 2020 runoff study, observed effects to non-target plants in several off-field movement studies, and conducted its own modeling analysis. SOF ¶¶ 144-45. Based on its analysis, EPA acknowledged "a potential risk of concern . . . due to runoff," but concluded these potential risks "will be reduced" "if applications are not made when the soil is saturated with water or when rainfall that may exceed soil field capacity is forecasted to occur within 24-48 hours." SOF ¶ 146. EPA thus adopted a more conservative approach than the 2018 label, by prohibiting application if soil is saturated or when rainfall that may exceed soil capacity is forecasted within 48 hours. SOF ¶ 147.

Rainfall and Wide Area Affects: Plaintiffs also assert (at 17-18) that EPA failed to consider harm from dicamba in rainfall, which they argue occurs due to the accumulation of dicamba vapor in the air (volatility), and wide area effects from alleged vapor drift. But EPA thoroughly evaluated those exact concerns. SOF ¶¶ 148-52. EPA evaluated numerous studies on volatility, including field studies of both registrants and many academics. SOF ¶¶ 148-62. Based on its review, EPA implemented various measures to address volatility, including application cutoff dates, the use of VRAs for all applications, and a 57-foot omnidirectional buffer for applications in ESA counties. SOF ¶ 162. [redacted] EPA reasonably determined such mandatory control measures would be effective. SOF ¶ 156.

Trees: Next, Plaintiffs assert (at 18-19) that EPA failed to consider dicamba harm to trees. Not so. SOF ¶¶ 163-73. As Plaintiffs admit (at 18-19), EPA reviewed a 2020 study that evaluated the effects of dicamba on trees. But Plaintiffs distort that study by

[9] Plaintiffs refer (at 16) to "studies" in the record that allegedly "showed significant damage from runoff up to ten days after spraying," but Plaintiffs *do not* cite studies for that assertion. Instead, Plaintiffs cite EPA meeting notes that do not support their assertion. *See* Pls.' Mot. at 16 (citing PSOF ¶¶ 84-85 which relies on various EPA meeting notes).

relying (at 19 n.14) on a *typographical error* in the Data Evaluation Record (DER) accompanying the 2020 study. Plaintiffs mischaracterize the study as "not scientifically sound," *see* PSOF ¶ 95, but the executive summary of the DER and the DER's conclusions both indicate that EPA determined that "[t]his study is scientifically sound and is classified as acceptable." SOF ¶ 166. This study was conducted according to established guidelines used by EPA and showed potential impacts were below the relevant threshold. *Id.*[10] Each of these EPA technical judgments is entitled to deference. *See supra* at 12.

ESA Analysis: Likewise, EPA took a highly conservative approach to its *endangered species analyses* and concluded, based on its scientific expertise and the record before it, that the 2020 Registrations would have "no effect" on protected species and would not adversely modify critical habitat. *See* SOF ¶¶ 174-87 (describing methodology). Plaintiffs have not pointed to any evidence of actual harm to threatened and endangered species or any other information sufficient to undermine EPA's conclusion. Rather, Plaintiffs point to aggregated reports of alleged "damage," primarily to soybean fields, but such uninvestigated claims relating to plants that are not threatened or endangered, are materially more sensitive to dicamba than other plants, and are in different locations than protected species, cannot overcome the agency's well-reasoned no-effect conclusion. *See, e.g.*, *Friends of the Santa Clara River v. U.S. Army Corps of Eng'rs*, 887 F.3d 906, 923-24 (9th Cir. 2018) (upholding "no effect" determination); *see infra* at 28-29.

Although Plaintiffs criticize the methodology EPA used for making an effects determination, EPA reasonably relied on the same 2004 Overview of Ecological Risk Assessment Process that the Ninth Circuit upheld in the *Enlist* decision. *See* SOF ¶¶ 176; *Enlist*, 966 F.3d at 925 (upholding use of 2004 methodology); *see also Bear Lake Watch, Inc. v. FERC*, 324 F.3d 1071, 1077 (9th Cir. 2003) (agency choice of methodology entitled to deference). Plaintiffs falsely claim (at 24-25) that the *Enlist* decision casts doubt on EPA's use of the 2004 Overview's methodology here. But *Enlist* was published mere

[10] According to EPA's Guidelines only plants exhibiting above 25% effects relative to the control require further study; no species studied met that threshold. SOF ¶¶ 167-70.

months before the 2020 Registrations and expressly recognized that EPA could continue to use the 2004 Overview methodology while it was in the process of implementing new methodologies. *Enlist*, 966 F.3d at 925-27; *accord San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 610 (9th Cir. 2014) ("Our deference to agency determinations is at its greatest when that agency is choosing between various scientific models . . . .").

To ensure a sufficiently conservative analysis under the ESA, EPA adopted a 95% certainty of no effects standard—not a lesser degree of certainty that would be acceptable under FIFRA. *See Enlist*, 966 F.3d at 923-24 (affirming EPA's use of "risk quotients" and "levels of concern" because it "applied much more conservative assumptions" than required by FIFRA); SOF ¶ 197 (describing the standard used). And EPA *very conservatively* required special restrictions on every acre in every county where endangered plants might be found, even though EPA had detailed, sub-county protected species location information assembled from non-profit conservation organizations and state wildlife agencies. *See* SOF ¶¶ 204-07. These data showed that the species, and their habitats, were found only in a small area in the relevant counties. SOF ¶ 205.[11]

EPA also took a highly conservative approach by using soybeans as surrogates to assess potential effects to protected plant species, as "soybeans are known to be the most sensitive plants to dicamba exposure." SOF ¶ 187. EPA applied still further conservative analysis by studying whether dicamba off-target movement created at least 10% visual injury to plants, SOF ¶ 184, despite many studies indicating that far greater visual injury—possibly up to 40% (as posited by Professor Bradley)—is necessary to cause any genuine impact, such as yield loss. *See* SOF ¶¶ 184-88. The Court should reject Plaintiffs' invitation to "second guess the agency's decisions using [its] own judgment" when the agency brings to bear such "special expertise." *Enlist*, 966 F.3d at 925. Plaintiffs' concerns about animals foraging within action areas are also misplaced. EPA specifically considered the risks to foraging animals but found no risk sufficient to alter its "no effect" conclusion. *See* SOF ¶¶ 208-14; *Enlist,* 966 F.3d at 924-26; *see infra* at 20.

[11] These data are part of Intervenors' Motion to Complete the Record, ECF No. 122.

Plaintiffs are also wrong to argue that EPA erred in defining the "action area" for its ESA analysis. EPA conservatively defined the "action area" (*i.e.*, area to be affected directly or indirectly by EPA's action) for the 2020 Registrations by considering the relevant risks of dicamba moving off the treated field. *See* SOF ¶¶ 192-96; 50 C.F.R. § 402.02. In doing so, EPA properly accounted for all of the mandatory mitigation measures designed to address potential off-target movement, including buffer distances. *See* SOF ¶ 196; *see also Enlist*, 966 F.3d at 923-24. And, as noted above, EPA's buffer distances were based on numerous field studies conducted by independent academics and registrants. *See* SOF ¶ 182; *see also Enlist*, 966 F.3d at 924-25 (upholding EPA's use of buffer distances as a mitigation measure). These and other data fully supported EPA's 310-foot downwind buffer and 57-foot omnidirectional buffer. SOF ¶ 182. EPA's approach to defining the action area for the 2020 Registrations was consistent with the approach the Ninth Circuit upheld in *Enlist*, 966 F.3d at 927-28, and is entitled to deference. *See Native Ecosystems Council v. Weldon*, 697 F.3d 1043, 1053 (9th Cir. 2012).

Plaintiffs also contend (at 28) that EPA did not address indirect effects to species that rely on non-protected plants for food or other support. But EPA reasonably considered indirect risks to ESA-protected species and their habitats in accordance with the 2004 Overview Document. *See* SOF ¶ 176; 2004 Overview Document at 48-50. Although EPA determined that less-stringent buffer requirements were sufficient in counties without protected plant species, it nonetheless analyzed (through a broader "action area") the potential effects beyond the treated field in assessing potential indirect effects to non-plant species. Specifically, in counties without the ESA buffers, EPA's analysis included both the 240-foot FIFRA downwind buffer and an additional 70 feet. *See* SOF ¶ 195. Moreover, EPA found that buffer distances, calendar cutoff dates and VRA tank-mix requirements protect against indirect effects to species relying on plant life in those counties by mitigating off-target movement. *See supra* at 13-17.

Finally, Plaintiffs err in arguing that EPA failed to engage in consultation regarding critical habitats. The mere presence of a substance within a critical habitat does not equate

to adverse modification that requires consultation. *See Enlist*, 966 F.3d at 928-29. EPA properly considered "whether there would be any effect on 'one or more of the designated [primary constituent elements]'" supporting the critical habitat for species that use the treated field and found no habitat modification. *See* SOF ¶ 208; *Enlist*, 966 F.3d at 928. For other species, including those that would not occur on an agricultural field, the evidence supported EPA's conclusion of no adverse modification on habitats given EPA's determination that the label restrictions imposed would limit dicamba's impact beyond the treated field. *See* SOF ¶¶ 207-14; *see also Enlist*, 966 F.3d at 927-28 (holding that EPA's limitation of action area to the treated field was not arbitrary and capricious).

II. PLAINTIFFS CANNOT RELY ON *POST-DECISIONAL* INFORMATION

In the face of significant administrative record support demonstrating the merits of EPA's conclusions, Plaintiffs seem to recognize that they cannot prevail here without significant *post-decisional extra-record* information—information that was not before EPA when it made the 2020 decision. *See* CSOF ¶¶ 111-73. But it is black-letter law that a "reviewing court must review the administrative record before the agency at the time the agency made its decision." *Nat'l Wildlife Fed'n v. U.S. Army Corps of Eng'rs*, 384 F.3d 1163, 1170 (9th Cir. 2004). Thus, a plaintiff "may not use 'post-decision information as a new rationalization . . . for . . . attacking the Agency's decision." *Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.*, 450 F.3d 930, 943 (9th Cir. 2006).

It is even worse than that. This Court ordered the parties to notify EPA of any alleged defects with the Administrative Record for the 2023 Amendments by March 29, 2023, and ordered that any motions to amend or supplement the Administrative Record be filed by April 12, 2023. ECF. No. 148. But Plaintiffs now seek to smuggle in *additional* material to support their merits arguments. *See, e.g.*, PSOF ¶¶ 15, 20, 62, 159-60.

To the extent Plaintiffs wish to raise concerns based on post-decisional information, the statute and regulations prescribe the proper path to bring such information to EPA's attention: an administrative petition filed with EPA to cancel a registration. *See* 7 U.S.C. § 136d(b)(1); 40 C.F.R. § 154.10. Under those provisions, any interested person may

petition EPA to initiate a cancellation proceeding. That process requires EPA to seek and explicitly consider specific input from USDA and other stakeholders. *See supra* at 5-6. And if EPA ultimately denies the petition, petitioners *can then* challenge that denial in court. *See* 7 U.S.C. §§ 136d(h), 136n(a).[12] Plaintiffs have used this process on multiple occasions.[13]

Congress designed this mechanism to require EPA to assess the potential harm to agriculture that could arise from taking a pesticide off the market, and to balance that harm with health, safety, and other possible concerns. For example, Congress mandated that EPA consider the impacts on "production and prices of agricultural commodities, retail food prices, and otherwise on the agricultural economy." 7 U.S.C. § 136d(b)(2). And Congress further required that EPA consider whether additional restrictions rather than outright cancellation would be appropriate in light of impacts on the agricultural economy. *Id.* Plaintiffs cannot "bypass" the "detailed procedures Congress enacted with respect to cancellation or suspension of registrations" by refusing to utilize this specialized remedy. *Bradbury*, 2014 WL 1569271, at *7; *see also Avadel CNS Pharms., LLC v. Becerra*, No. 1:22-cv-02159, 2022 WL 16650467, at *6 (D.D.C. Nov. 3, 2022). Plaintiffs improperly ask this Court to review *post-decisional* information and do EPA's job, without the exacting process and substantive input Congress explicitly required.

III. PLAINTIFFS' SUBPART D REGULATORY ARGUMENT IS MERITLESS

Plaintiffs also insist that EPA violated its own regulations by not following "subpart D of part 164"—40 C.F.R. §§ 164.130-33—to "un-cancel" the 2018 registration. *See* Pls.' Mot. at 31-32 (citing 40 C.F.R. § 152.100(b)). That is wrong. The procedures of subpart D apply *only* to an EPA reconsideration that comes after cancellation by the *Administrator* following a formal hearing under FIFRA Section 6(b) and 40 C.F.R. part 164, subpart B

[12] *Ellis v. Bradbury*, No. C-13-1266, 2014 WL 1569271, at *6 (N.D. Cal. Apr. 18, 2014); *Friends of Animals*, 383 F. Supp. 3d at 1119; *Beyond Pesticides/Nat'l Coal. Against the Misuse of Pesticides v. Whitman*, 294 F. Supp. 2d 1, 2 (D.D.C. 2003).

[13] *See* 86 Fed. Reg. 36,546 (notice on Center for Biological Diversity's petition to cancel); 77 Fed. Reg. 44,233 (notice on CFS's petition to cancel); *see also Bradbury*, 2014 WL 1569271, at *6; *Ellis v. Housenger*, 252 F. Supp. 3d 800 (N.D. Cal. 2017).

and all the other explicit and detailed steps that section requires. *See* 40 C.F.R. § 164.130 (explaining how the Subpart D process works and why). The Ninth Circuit's vacatur did not trigger Subpart D. *See id.* § 164.131(a)(1) (Subpart D reconsideration is warranted if the Administrator finds that "[t]he applicant has presented substantial new evidence . . . *which was not available to the Administrator at the time he made his final cancellation or suspension determination*." (emphasis added)). Here, the registrations were vacated by the Ninth Circuit—not by the Administrator following a formal, adversarial proceeding conducted by the Administrator under FIFRA Section 6(b).[14]

IV. PLAINTIFFS ARE WRONG ABOUT THE 2022-2023 AMENDMENTS

EPA has argued that Plaintiffs lack standing to challenge the 2022 and 2023 Label Amendments adding further application restrictions in Iowa, Indiana, Illinois, Minnesota and South Dakota. Even if Plaintiffs have standing, their arguments fail. The 2022 and 2023 amendments were specifically targeted for those States with an elevated number of complaints (even uninvestigated complaints). SOF ¶¶ 117, 218-31. In Iowa, for example, the 2023 amendments mandate that applications of XtendiMax, Engenia, and Tavium halt ***no later than June 12th***—before the higher summer temperatures that EPA suggests can increase volatility. SOF ¶ 248. The Iowa label amendments also require that applications stop when a soybean field reaches a certain vegetative stage known as V4, which occurs *earlier than June 12th* for a large percentage of soybean fields—usually in late May or the first week in June. SOF ¶ 249. Together these new restrictions: (1) materially reduce the average temperature when the pesticide is applied, and (2) reduce the total amount of pesticides applied. SOF ¶ 263-65. EPA drew on its prior scientific analyses regarding volatility and temperature to support the conclusions that the additional restrictions would be effective. SOF ¶ 258. Indeed, data before EPA showed that the vast majority of prior complaints were associated with applications after mid-June. SOF ¶¶ 233, 265. And data from Minnesota confirmed that similar 2022 Amendments had been successful:

[14] For the reasons explained in EPA's brief, EPA was not required to provide notice and comment for the 2020 Registrations as the active Tavium registration made clear that the 2020 Registrations were not for new uses.

[redacted] SOF ¶¶ 244-46.

EPA reasonably concluded that "[r]estricting the application to a time when temperature is reduced both at the day of application and in the days following the application is likely to reduce the potential for volatilization of dicamba." SOF ¶¶ 259-60. EPA is entitled to deference on this technical assessment. For all the remaining 29 States that did not see the need for restrictions, the 2020 Registrations remained in effect, without change. Contrary to Plaintiffs' mischaracterizations, registrants did not submit similar requests to change EPA labels in the 29 other States. As to its ESA requirement for these five States, EPA reasonably concluded that because the calendar cutoff "adds further restriction," than what was considered in the ecological risk assessment for the 2020 Registrations, no new ecological risk assessment was required. SOF ¶ 241.

V. EVEN IF PLAINTIFFS WERE TO PREVAIL ON THE MERITS (THEY SHOULD NOT), VACATUR WOULD NOT BE THE PROPER REMEDY

A nationwide vacatur would be entirely inappropriate here. Such a broad remedy could cause dramatic harm in dozens of States–even States in which use of these pesticides has not caused issue. And it would ignore the expert views of the States themselves, which have all eschewed such action. Even if the Court thought some issue was posed for endangered species (it is not), those species are found in only a *small percentage* of counties where Intervenors' products are used. SOF ¶¶ 205-07. As with other equitable remedies, the decision to vacate rests with this Court's discretion, *see MCI Telecomms. Corp. v. FCC*, 143 F.3d 606, 609 (D.C. Cir. 1998), and must be "no more burdensome to the defendant than necessary," *e.g.*, *Califano v. Yamasaki*, 442 U.S. 682, 702 (1979).

Whether to order vacatur turns on "how serious the agency's errors are 'and the disruptive consequences of an interim change that may itself be changed.'" *Cal. Cmtys. Against Toxics v. EPA*, 688 F.3d 989, 992-94 (9th Cir. 2012); *see also Idaho Farm Bureau Fed'n v. Babbitt*, 58 F.3d 1392, 1405 (9th Cir. 1995) (remand without vacatur appropriate "when equity demands"); *Allied-Signal, Inc. v. U.S. Nuclear Regul. Comm'n*, 988 F.2d

146, 150-51 (D.C. Cir. 1993). Both considerations weigh strongly against vacatur.

First, vacatur would cause tremendous harm to American agriculture. *See* SOF ¶¶ 267-319; Sunding Decl. ¶¶ 66-76; Griffin Decl. ¶¶ 21-26; Moore Decl. ¶¶ 91-102. If the consequences caused by vacatur are disruptive, courts *remand without vacating* the action. *See Cal. Cmtys.*, 688 F.3d at 992-94; *see also* SOF ¶¶ 15, 268-76 (explaining hardships posed by vacatur). Over-the-top application of dicamba is a critically important tool for farmers to address difficult-to-control weeds. If these products are suddenly pulled from the market, [redacted] SOF ¶ 312. [redacted] SOF ¶ 15. The systemic threat posed to agriculture provides more-than-sufficient grounds for declining to vacate the Registrations. *See Enlist*, 966 F.3d at 929-30 (highlighting "potentially serious disruption if a pesticide that has been registered for over five years can no longer be used"). Plaintiffs here are philosophically opposed to pesticides and recklessly seek a remedy that could inflict immense harm on farmers. Indeed, they have already notified EPA of their intent to challenge the registration of the only other widely available pesticide for soybeans. SOF ¶ 275. There would not be sufficient seed alternatives for cotton. *See* Hays Decl. ¶ 5.

The broader economic consequences weigh heavily here given FIFRA's mandate to consider economic costs before removing pesticides from the market. *See* 7 U.S.C. § 136d(b); *see also Cal. Cmtys.*, 688 F.3d at 994 (vacatur inappropriate where it could be "economically disastrous"); *Love v. Thomas*, 858 F.2d 1347, 1362-63 (9th Cir. 1988) (finding EPA cancellation arbitrary and capricious where it was "insensitiv[e]" to "[c]rop losses of over $39 million" and corresponding "serious economic hardship[]").[15] The potential effect on national soybean production is so significant that the total impact is difficult to calculate. *See* SOF ¶¶ 285-87 [Sunding Decl. ¶ 66] (noting that "weed interference in soybean caused an average 52 percent reduction in yields when left unmanaged" and that reduction "would amount to a loss in farm gate value of more than

[15] Plaintiffs heavily rely on *Pollinator Stewardship Council v. EPA*, 806 F.3d 520 (9th Cir. 2015), but *Pollinator Stewardship* is inapposite, given the absence of any discussion of economic fallout, *id.* at 526, which readily distinguishes that case from this one.

$16 billion"). For cotton, estimates range from $392 million to $732 million depending on the percentage of acres that are susceptible to weed pressure without dicamba. SOF ¶ 92.

An order halting the use of Intervenors' products could have even more profound effects. Intervenors' products are utilized over specially engineered and bred soybean and cotton seed that include ideal genetics for disease resistance, yield, and many other critical issues. "[S]eed companies prepare years in advance to bring seeds to the market." SOF ¶ 268. The dicamba tolerant seed represents years of genetic gain, not just with the herbicide tolerance, but other favorable characteristics. *See* SOF ¶ 316 [Hays Decl. ¶ 6]. The loss of this genetic gain would take four to six years of breeding to obtain comparable seed suitable for each geographic region. SOF ¶ 319 [Hays Decl. ¶ 7].

If Intervenors' pesticides were suddenly unavailable, two things could happen. One possibility is that DT seed would become unavailable, setting American farmers back a decade with the immense benefits of these years of breeding lost. *See* Sunding Decl. ¶¶ 67, 72. Farmers may not even have sufficient disease-resistant seed for the upcoming seasons. SOF ¶ 318 [Hays Decl. ¶ 5]. Alternatively, if the DT seed remained available, applicators might illegally apply widely available higher volatility dicamba formulations, leading to even more significant problems than the ones Plaintiffs allege. Such illegal applications have occurred even with Intervenors' low-volatility dicamba pesticides on the market, despite Intervenors' and state agencies' best efforts to prevent them through state enforcement and Intervenor Bayer's suits against offending growers. *See supra* at 11. However, EPA has acknowledged that removal of these products from the market creates an incentive to use older, much more volatile formulations of dicamba that could increase off-target movement. SOF ¶¶ 133, 139 (EPA stating that "there will still be significant market incentives to use dicamba for weed control after crop emergence, leading to the potential for illegal applications of other dicamba products not intended for use on DT crops."). Imagine a situation in which this Court's order has the effect of significantly worsening the issue Plaintiffs say they seek to address.

Moreover, the absence of these specially formulated dicamba products, would lead

to *increased weed resistance* to other herbicides. *See* SOF ¶¶ 310-11 [Griffin Decl. ¶¶ 24-25]. And if farmers are forced to turn to other herbicides, there may not be sufficient supplies to replace dicamba products that have been used for six years, *see* SOF ¶¶ 317-19 [Hays Decl. ¶¶ 5-7]; indeed, Plaintiff CFS has also indicated its intent to challenge the other main herbicide system for soybean and cotton. *See supra* at 22 n.13. These issues could devastate our agricultural economy.

Given the grave economic harm that growers face from weed pressure, growers cannot give up on herbicide use altogether. Growers would "have to use more herbicides, with more frequent applications with rotations and mixtures of herbicides" and "even with all of the additional herbicide use, producers would still likely have an expectation of yield reduction." SOF ¶ 293. In short, removing these products from the market would *increase herbicide use*, including use of products that are more volatile and have a higher toxicity profile from a human health and ecological risk perspective. *See* SOF ¶¶ 293-95 [Moore Decl. ¶ 101-05]. Even if some growers were to resort to mechanical tillage, which is unlikely, that too would result in significant environmental harm. Data demonstrates that just a 6.2% reduction in conservation tillage and a 9.2% reduction in no-till practices resulted in a cost of more than $470 million in water quality and climate damage over a decade. SOF ¶ 3. Of course, widespread mechanical tillage practices have had dramatically negative environmental impacts in the past. SOF ¶ 3.

Preventing economic harm and potential negative environmental consequences warrant remand without vacatur. *See Ctr. for Biological Diversity v. EPA*, 861 F.3d 174, 188-89 (D.C. Cir. 2017) (declining to vacate a registration because of the environmental risks associated with alternatives); *see also Susquehanna Int'l Grp., LLP v. SEC*, 866 F.3d 442, 451 (D.C. Cir. 2017) (declining to vacate because doing so "would be . . . a 'logistical nightmare'"). And remand would allow EPA to correct any alleged deficiencies. *See, e.g.*, *Nw. Coal. for Alts. to Pesticides (NCAP) v. EPA*, 544 F.3d 1043, 1052-53 (9th Cir. 2008).

In contrast to the concrete harms vacatur would inflict, Plaintiffs have not demonstrated that authorized use of over-the-top dicamba is likely to cause adverse effects

to the environment, protected species, or agriculture. On the contrary, yields of soybean and cotton have continued to grow in the years following introduction of these products. SOF ¶ 98, 279; Sunding Decl. ¶¶ 14, 18-21. Dr. David Sunding evaluated county-level yields in the years before and after the introduction of these products, separately for counties in the ten States with the highest number of uninvestigated reports of off-target movement and in those States that were lower. If anything, soybean yields in high-complaint States improved after 2016 more than yields in other States, and cotton yields also tended to improve after the introduction of over-the-top dicamba in high-complaint States more than in other States. *See* SOF ¶ 279 [Sunding Decl. ¶¶ 19-20].

Plaintiffs' concerns are also belied by other evidence. They predicate their demand for vacatur on exaggerated claims of alleged visual symptomology. As an initial matter, nowhere do Plaintiffs explain this: according to the same expert on which Plaintiffs rely, even in cases where dicamba moves off a field and produces some noticeable dicamba symptomology, the nearby crops almost always fully recover and show little or no yield loss at all. *See supra* at 19 (citing Bradley). As Professor Griffin explains, "[e]xtensive experience in herbicide symptomology identification and level of severity would be necessary . . . to conclude that symptoms observed would result in crop yield loss," and symptomology such as leaf cupping is "not a predictor of yield loss." Griffin Decl. ¶ 19; *see also* Sunding Decl. ¶¶ 37-46 (explaining that visual symptomology is not necessarily indicative of yield loss); Moore Decl. ¶¶ 40-44.

Moreover, there is little evidence to suggest that reports of off-site incidents were ever attributable to label-compliant applications of over-the-top dicamba—much less under the even more restrictive conditions imposed by the new label amendments. And while EPA has credited concerns about the number of complaints in the conservative analysis it used for the 2020 Registrations and subsequent label amendments, many of these complaints were not followed by verifying investigations. As Professor James Griffin explained, an uninvestigated report cannot be equated with actual damage. *See* Griffin Decl. ¶ 19. Other herbicides, like 2,4-D, can cause symptoms "indistinguishable from

those associated with dicamba," and investigating the herbicide responsible is often "time consuming" and requires "extensive knowledge of herbicides and their mode of action and symptomology." *Id.* ¶¶ 12, 19. And EPA's own guidance for ecological risk assessments for evaluating incident reports for listed and non-listed species during registration review undercuts Plaintiffs' reliance on these purported incidents. *See* Moore Decl. ¶¶ 52-53. Crucially, under this guidance, a detailed analysis of the available report is required, including whether the use in each incident was legal under the labeling and whether it was associated with a specific product formulation. *Id.* ¶¶ 56-58.

Ultimately, nothing can replace field investigation of off-target movement allegations. One court even barred testimony by Dr. Ford Baldwin, which the Ninth Circuit had credited in vacating the 2018 registration, because Dr. Baldwin's "opinions related to dicamba injuries to fields he has not visited." *See In re: Dicamba Herbicides Litig.*, No. 1:18-md-02820 (E.D. Mo. Feb. 1, 2018), ECF No. 519 at 20; *see also* SOF ¶¶ 304-05 [Moore Decl. ¶¶ 60] (Arkansas's Plant Board investigations in 2017 show that only a small portion of complaints (roughly 17%) can actually be linked to label-compliant applications of the pesticides at issue here and an even smaller percentage for 2020). And no State has banned over-the-top application of dicamba; their expert judgments should be respected.

Even if credited, none of Plaintiffs' alleged violations are so "serious" as to prevent their correction on remand without vacatur. EPA evaluated dozens of new field studies conducted by independent academic experts showing the effectiveness of EPA's buffers, SOF ¶ 182, new EPA modeling, SOF ¶ 144, the efficacy of VRAs, SOF ¶¶ 105, and consistently increasing yield, SOF ¶¶ 39-41. Based on that information, EPA concluded that the Registrations, including new label restrictions, would "address the potential for adverse effects" on the environment and would have no effect on listed species. SOF ¶ 78. To the extent that any portion of that analysis fell short (and it did not), that could be rectified on remand with further explanation and analysis. *See, e.g.*, *Enlist*, 966 F.3d at 929-30 (failure to consider indirect harm was not a "serious" error warranting vacatur); *Ctr. for Biological Diversity*, 861 F.3d at 188-89 (ordering "remand without vacatur"

despite EPA's failure to make an ESA effects finding); *see also* Moore Decl. ¶¶ 76-90.

If this Court were to consider ***some form*** of vacatur, the scope should be narrowly tailored—a ***partial vacatur***. Plaintiffs look to identify alleged flaws in EPA's analysis that could, at most, be relevant to a few select geographic areas. Even if the Court thought some limited subset of Plaintiffs' concerns were valid, any remedy should be limited to areas where a genuine risk actually exists. *See* 7 U.S.C. § 136n(b) (allowing this Court to set aside a FIFRA order "in whole or in part"). If this Court concluded, for example, that there is a substantial possibility of crop damage in certain counties in certain States (which registrants strongly dispute), rendering the registrations invalid under FIFRA, it should at most vacate the registration only with respect to those counties. *See, e.g.*, *S. Coast Air Quality Mgmt. Dist. v. EPA*, 489 F.3d 1245, 1248-49 (D.C. Cir. 2007) (tailoring scope of vacatur). Likewise, any ESA remedy should be limited to where protected species are found. The Court should give EPA an opportunity to review the relevant data—especially given the most recent label amendments—to determine where actual impacts on any relevant species would manifest, and keep intact the remainder of the registrations. *See NetworkIP, LLC v. FCC*, 548 F.3d 116, 122 (D.C. Cir. 2008) ("We cannot review 'questions of fact or law upon which the Commission, or designated authority within the Commission, has been afforded no opportunity to pass.'").

Moreover, EPA has access to data that EPA has specifically required registrants to provide, that would allow the agency to identify, *with great specificity*, where certain protected species are present within each county. *See* SOF ¶¶ 203-07. This local data strongly supports a tailored localized remedy. Intervenors respectfully submit that the Court could benefit from further briefing and proceedings on appropriately tailored remedies in the event that it finds that EPA has acted erroneously in any respect.

CONCLUSION

For the reasons above, Intervenors respectfully request that the Court grant Intervenors' Motion for Summary Judgment and deny Plaintiffs' Motion for Summary Judgment.

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