

April 30, 2021

The Honorable Deb Haaland
Secretary
U.S. Department of the Interior
1849 C Street, NW
Washington, DC 20240

Martha Williams
Principal Deputy Director
U.S. Fish and Wildlife Service
1849 C Street, NW
Washington, DC 20240

RE: Uses of Agricultural Pesticides and Genetically Engineered Crops in National Wildlife Refuges

Dear Secretary Haaland and Principal Deputy Director Williams,

With biodiversity and wildlife habitat disappearing at an alarming rate, the National Wildlife Refuge System provides a key safeguard to maintaining the health, integrity, and diversity of wildlife and plants across the country. The unnecessary use of pesticides for commercial agricultural purposes defeats the objectives of the Refuge System and poses a significant threat to the species that rely on these refuges and the habitats that they provide. On behalf of our 108 organizations and our millions of members and supporters, we therefore respectfully request that you take urgent action to preserve the integrity of our Refuge System by:

1. Withdrawing the August 2, 2018 memorandum by Gregory Sheehan to the Service Directorate entitled “Withdrawal of Memorandum Titled, ‘Use of Agricultural Practices in Wildlife Management in the National Wildlife Refuge System’ (July 17, 2014)”;
2. Reinstating the July 17, 2014 memorandum entitled “Use of Agricultural Practices in Wildlife Management in the National Wildlife Refuge System”; and
3. Initiating formal rulemaking procedures to eliminate all non-essential uses of chemical pesticides and genetically engineered crops for commercial agricultural purposes in the Refuge System.

We further request that you apply a more rigorous review and stricter scrutiny to all pesticide use in commercial agriculture on Refuge System lands while this process is ongoing.

The Refuge System maintains a diverse and highly complex system of habitats that provide food, shelter, and spawning grounds for a variety of species listed as threatened and endangered under the U.S. Endangered Species Act (ESA). The System also provides essential stop-over points for migratory birds, such as tundra swans, grasshopper sparrows, and sandhill cranes, in areas across the country where development and other human-caused habitat degradation have left these magnificent birds with few safe options. These species and the habitats that they depend on are routinely harmed by commercial agricultural practices that utilize toxic chemical pesticides—uses that have expanded in the Refuge System over the past five years.

Despite the critical role that national wildlife refuges play in protecting imperiled fish, plants, migratory birds, and other wildlife, in 2018 more than 350,000 pounds of dangerous agricultural

pesticides were sprayed on more than 360,000 acres of America’s refuges—a 34% increase over the acreage sprayed in 2016.¹ Those pesticide applications, which include toxic pesticides such as glyphosate, 2,4-D, and dicamba, are predominantly used for the purpose of growing conventional monoculture crops such as soybeans, cotton, and corn—uses that are expected to expand if genetically engineered crops designed specifically to withstand otherwise deadly applications of these pesticides are allowed on refuges following the 2018 Sheehan memorandum. The continued use of these and other toxic chemicals for discretionary commercial agricultural purposes is harmful to wildlife, threatens the long-term health of these essential ecosystems, conflicts with the purpose of the Refuge System, and must be discontinued.

I. Background

a. *The Refuge System and Commercial Agricultural Uses*

The Refuge System consists of millions of acres of public lands and waters managed by the Fish and Wildlife Service (Service) for the conservation of plants, fish, wildlife, and their habitats.² Refuges provide habitat for more than 700 species of birds, 220 species of mammals, 250 reptile and amphibian species, and more than 1,000 species of fish. These refuges also provide protections for more than 280 plants and animals listed as threatened or endangered under the ESA.³ Some refuges where toxic pesticides are routinely used, such as the Key Cave National Wildlife Refuge in Alabama, were originally created specifically for the benefit of critically endangered species, whereas other refuges were created for broader purposes such as for providing inviolate sanctuaries for migratory birds.⁴

There is at least one refuge in each U.S. state and territory, with more than 100 refuges close to large urban areas, also making these lands refuges for people seeking quiet, an escape from urban pollution sources, and the opportunity to view wildlife.⁵ For example, the Chickasaw, Hatchie, and Lower Hatchie National Wildlife Refuges are located just north and upstream of Memphis, Tennessee. These refuges provide not just an escape into nature, but the Lower Hatchie is considered “one of the nation’s wetland treasures.”⁶ However, these refuges also

¹ Ctr. for Biological Diversity, *No Refuge: More Acres of America’s National Wildlife Refuges Are Being Doused in Harmful Pesticides*, 1 (Aug. 2020), https://www.biologicaldiversity.org/campaigns/pesticides_reduction/pdfs/No-Refuge-Report-2020.pdf.

² 16 U.S.C. § 668dd(a)(2) (“The mission of the Refuge System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”).

³ Service, Threatened and Endangered Species on National Wildlife Refuges Database, https://www.fws.gov/refuges/databases/ThreatenedEndangeredSpecies/ThreatenedEndangered_Display.cfm (last visited Mar. 22, 2021).

⁴ *See, e.g.*, Service, Wheeler National Wildlife Refuge Complex: Comprehensive Conservation Plan and Environmental Assessment, 15 (2007), <https://ecos.fws.gov/ServCat/Reference/Profile/1468> (listing refuges established “to conserve (A) fish or wildlife which are listed as endangered species or threatened species” next to refuges established for other purposes).

⁵ Testimony of Robert Wallace, Ass’t Sec. for Fish and Wildlife and Parks, Dep’t of the Interior before the Senate Comm. on Env’t and Public Works, 116 Cong. (Feb. 5, 2020), <https://www.doi.gov/oc/oversight-fws>.

⁶ Tennessee State Parks, Lower Hatchie National Wildlife Refuge, https://www.stateparks.com/lower_hatchie_national_wildlife_refuge_in_tennessee.html (last visited Mar. 23, 2021).

utilize chemical pesticides to grow commercial row crops such as corn and soybeans that can be harmful to visitors and affect water quality for downstream populations.

Pursuant to the National Wildlife Refuge System Administration Act, as amended by the National Wildlife System Improvement Act (collectively Refuge Act), 16 U.S.C. § 668dd(a)(1), the Service must manage each refuge in furtherance of the Refuge System’s mission and for the benefit of current and future generations.⁷ In managing these refuges, “the fundamental mission of [the] System is wildlife conservation: wildlife and wildlife conservation must come first.”⁸ To support this goal, Congress directed the Secretary of the Department of the Interior to “ensure” that the biological integrity, species diversity, and environmental health of the Refuge System are prioritized and preserved.⁹

Historically the Service has allowed private commercial farming on refuges in order to help prepare seed beds for native habitat, such as grasslands, and to provide food for migratory birds and other wildlife. To support this purpose, a refuge may allow “public or private economic use[s] of the natural resources of any national wildlife refuge,” when it “determine[s] that the use contributes to the *achievement* of the national wildlife refuge purposes or the National Wildlife Refuge System mission.”¹⁰ An economic use is an “activity on a national wildlife refuge that results in generation of a commodity which is or can be sold for income or revenue or traded for good and services. Examples include: farming[.]”¹¹ Despite these threshold requirements, industrial farming and associated heavy pesticide use have become increasingly commonplace on refuges, to the detriment of these lands and the species that rely on them.

b. Litigation Related to the Use of Pesticides and Genetically Engineered Crops in Refuges Prior to the 2014 Memorandum

Prior to the 2014 memorandum, federal courts raised significant concerns regarding the unlawful use of genetically engineered crops and other agricultural practices in national wildlife refuges. In *Delaware Audubon Soc’y v. Sec’y of U.S. Dep’t of Interior*, 612 F. Supp. 2d 442 (D. Del. 2009), the court held that the Service violated the Refuge Act by allowing cooperative farming on Prime Hook National Wildlife Refuge without first conducting a written compatibility determination, and violated the National Environmental Policy Act (NEPA) by permitting genetically engineered crops to be grown on the refuge without first completing an environmental assessment or environmental impact statement. Likewise, in *Ctr. for Food Safety v. Salazar*, 900 F. Supp. 2d 1 (D.D.C. 2012), the court found Plaintiffs’ claims not to be moot and that the Service acted unlawfully when it authorized the farming of genetically engineered corn and soybeans in the Southeast Region (then Region 4) without first conducting a compatibility determination as required by the Refuge Act or preparing an environmental assessment or environmental impact statement as required by NEPA.¹²

⁷ 16 U.S.C. § 668dd(a)(2); *id.* § 668dd(a)(3)(A).

⁸ House Report 105-106.

⁹ 16 U.S.C. § 668dd(a)(4)(B).

¹⁰ 50 C.F.R. § 29.1 (emphasis added).

¹¹ 603 FW 2.6(N), (Q).

¹² *See also Ctr. for Food Safety v. Salazar*, 898 F. Supp. 2d 130 (D.D.C. 2012).

At their root, these cases represent instances in which federal courts determined that the Service was in violation of its core obligations under the Refuge Act and other key environmental laws in approving the use of genetically engineered crops and other agricultural practices on refuges. Following on the heels of these legal actions, in February 2014 a coalition of food safety, conservation, and wildlife advocacy groups led by the Center for Food Safety filed a legal administrative rulemaking petition with supporting materials requesting, based on the above court decisions and well-established science showing harm, that the Service phase-out the use of neonicotinoids and genetically engineered crops in the Refuge System and take immediate action to ensure system-wide compliance with the ESA.¹³

c. Neonicotinoid Pesticides and Genetically Engineered Crops: The 2014 and 2018 Service Memorandums

On July 17, 2014, the Service issued a memorandum phasing-out the use of neonicotinoid pesticides and genetically engineered crops for agricultural purposes throughout the Refuge System.¹⁴ The Service's action was well-supported by science, and correctly determined that such practices were not compatible with the mission of the Refuge System. Neonicotinoid pesticides, for example, are known to cause adverse impacts on a wide range of taxonomic groups, many of which include endangered species found on wildlife refuges. Neonicotinoids are neurotoxic pesticides that function by disrupting normal functioning of the central nervous system in invertebrates, resulting in nervous system stimulation and eventually paralysis and death.¹⁵ All neonicotinoids are systemic, meaning the chemicals can be taken up through the plant roots, stems, and leaves and translocate throughout the plant. Therefore, once one part of a plant is exposed to a neonicotinoid, the entire plant can contain residues of the chemical and can cause potential toxicity to animals that feed on it. Neonicotinoids are also persistent in the environment with half-lives that can range from 148 days to more than three years.¹⁶ This persistence and high solubility make the pesticides highly susceptible to runoff into water bodies.¹⁷

Studies have confirmed that neonicotinoids interact with common bee pathogens and parasites, making bees more vulnerable to the deadly effects of both.¹⁸ Studies have also determined that

¹³ Ctr. for Food Safety, Ctr. for Biological Diversity, Public Employees for Env'tl. Responsibility, *Beyond Pesticides, Petition to the U.S. Fish and Wildlife Service to Ban Genetically Engineered Crops and Neonicotinoid Insecticides on all National Wildlife Refuges* (Feb. 25, 2014), http://www.centerforfoodsafety.org/files/refuge-petition_2_24_14_final_38986.pdf.

¹⁴ Service, Memorandum by James Kurth to Regional Refuge Chiefs, "Use of Agricultural Practices in Wildlife Management in the National Wildlife Refuge System" (July 17, 2014), https://www.biologicaldiversity.org/campaigns/pesticides_reduction/pdfs/2014-decision.pdf.

¹⁵ EPA, Thiamethoxam -Transmittal of the Preliminary Aquatic and Non-Pollinator Terrestrial Risk Assessment to Support Registration Review (Nov. 29, 2017).

¹⁶ Main, A. R., et al., *Widespread Use and Frequent Detection of Neonicotinoid Insecticides in Wetlands of Canada's Prairie Pothole Region*, *PLoS ONE*, 9(3), e92821 (2014).

¹⁷ EPA, Thiamethoxam -Transmittal of the Preliminary Aquatic and Non-Pollinator Terrestrial Risk Assessment to Support Registration Review (Nov. 29, 2017).

¹⁸ Jeffery S. Pettis et al., *Pesticide Exposure in Honey Bees Results in Increased Levels of the Gut Pathogen Nosema*, 99 *Die Naturwissenschaften* 153, 153–58 (2012). For a further literature review on the effects of neonicotinoid pesticides on pollinators, please see Hotze Wijnja, et al., *Pesticide Literature Compilation Approach and Results* (Dec. 2019), <https://www.mass.gov/doc/neonics-scientific-literature-review-december-2019/download>.

small doses of neonicotinoid pesticides can negatively affect the ability of songbirds to navigate, and can also put game and farmland birds at risk, including pheasants, grouse, bobwhite and partridges.¹⁹ This is especially concerning for birds that may eat a seed or other product coated with a neonicotinoid, such as the neonicotinoid imidacloprid, since consumption of neonicotinoid-coated seeds can cause direct mortality as well as sub-lethal effects, with a leading concern being harm to reproduction.²⁰ According to a 2017 Preliminary Terrestrial Risk Assessment by the U.S. Environmental Protection Agency, for example, a large bird (>1kg) would only need to eat *one* imidacloprid-treated potato seed to nearly exceed the risk of concern for acute harm.²¹ Even further, the Service listed the Poweshiek skipperling as endangered and Dakota skipper as threatened under the ESA in October 2014, and in doing so emphasized the impacts on these butterflies specifically from the neonicotinoid pesticides such as thiamethoxam and clothianidin, products used as seed treatments.²²

Similarly, genetically engineered crops are the subject of a companion suite of species and habitat risks. This is because genetically engineered crops are a pesticide-promoting technology that have been overwhelmingly developed for pesticide resistance. Indeed, in the U.S. alone, 92 percent of corn, 94 percent of cotton, and 94 percent of soybeans planted were GE, herbicide-resistant varieties in 2018.²³ The way the technology standardly works is that a pesticide and its resistant seeds are sold together as a “cropping system,” and because of this system, the crops’ resistance to a pesticide allows for increased spraying at increased intervals during the farming season. As a result, these pesticide-promoting genetically engineered cropping systems have dramatically increased the overall use of pesticides in U.S. agriculture. For example, in the sixteen years from 1996 to 2011, an extra 527 million pounds of herbicides are estimated to have been sprayed in U.S. agriculture because of these crops.²⁴ Parallel increases in herbicide use associated with the planting of genetically engineered crops in the Refuge System, particularly corn and soybean row crops, can be expected to result in increased concerns related to wildlife exposure and harms to biological integrity, diversity, and environmental health. These pesticide-resistant crop systems include crops engineered with resistance to glyphosate, but also more recently with resistance to older, more toxic and more volatile cocktails of pesticides, including

¹⁹ Margaret Eng et al., *Imidacloprid and chlorpyrifos insecticides impair migratory ability in a seed-eating songbird*, *Scientific Reports*, 7: 15176, DOI:10.1038/s41598-017-15446-x (2017); Yijia, L. et al., *Neonicotinoids and decline in bird biodiversity in the United States*, *Nature Sustainability*, DOI: 10.1038/s41893-020-0582-x (2020).

²⁰ Ertl, H. et al., *Potential impact of neonicotinoid use on Northern bobwhite (Colinus virginianus) in Texas: A historical analysis*, *PLoS ONE* 13:e0191100, <https://doi.org/10.1371/journal.pone.0191100> (2018); Millott et al., *Field evidence of bird poisonings by imidacloprid-treated seeds: a review of incidents reported by the French SAGIR network from 1995 to 2014*, *Environ Sci Pollut Res* DOI 10.1007/s11356-016-8272y (2016); Lopez-Antia et al., *Risk assessment of pesticide seed treatment for farmland birds using refined field data*, *Environmental Research* 136:97–107 (2015).

²¹ EPA, Preliminary Terrestrial Risk Assessment to Support the Registration Review of Imidacloprid, Docket No. EPA-HQ-OPP-2008-0844-1256 (Nov. 28, 2017), <https://www.regulations.gov/document/EPA-HQ-OPP-2008-0844-1256>.

²² 79 Fed. Reg. 63672, 63737 (Oct. 24, 2014).

²³ USDA, *Adoption of Genetically Engineered Crops in the U.S.*, <https://www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-us.aspx> (last visited Aug. 8, 2018).

²⁴ Charles Benbrook, *Impacts of genetically engineered crops on pesticide use in the U.S. – the first sixteen years*, 24 *Envtl. Sci. Eur.* 1, 3 (2012), <http://www.enveurope.com/content/pdf/2190-4715-24-24.pdf>; R. J. Seidler, *Pesticide use on genetically engineered crops*, *Ag/Mag Blog*, (Sept. 15, 2014), http://static.ewg.org/agmag/pdfs/pesticide_use_on_genetically_engineered_crops.pdf.

dicamba and 2,4-D.²⁵ Also, many seeds, and especially genetically engineered seeds, are routinely coated with neonicotinoids, and by 2011 well over a hundred million acres of corn, soy and cotton were planted in neonicotinoid treated seeds.²⁶ The prophylactic use of neonicotinoids on seeds, particularly on the genetically engineered seeds, results in widespread exposure of non-target organisms, like butterflies and bumblebees, to deadly toxic levels of neonicotinoids.

Recognizing these harms, the Service, through the 2014 memorandum, determined that the “prophylactic use, such as seed treatment, of the neonicotinoid pesticides that can distribute systemically in a plant and can potentially affect a broad spectrum of non-target species is not consistent with Service policy [569 FW 1 and 601 FW 3].”²⁷ It further concluded that because “[r]efuges throughout the country successfully met wildlife management objectives without the use of genetically modified crops,” that it was “no longer possible to say that their use is essential to meet wildlife management objectives, and, therefore, that the Service will “no longer use genetically modified crops to meet wildlife management objectives System-wide.”²⁸ At bottom, as that decision and the scientific community have long acknowledged, the continued approval of these practices—especially for non-essential purposes such as commercial row crop agriculture—was both non-essential for refuge management purposes and could severely impact the Service’s entrusted resources, including endangered and threatened species, migratory birds, and fish.

Pursuant to FWS’s 2014 directive, individual refuges had until January 2016 to discontinue the use of neonicotinoid pesticides and genetically engineered crops. This transition was successful, with refuges across the country able to adapt to the removal of this agricultural practice while continuing to meet their wildlife management and conservation objectives. Nevertheless, on August 2, 2018, Principal Deputy Director Greg Sheehan abruptly and fully withdrew the agency’s prior decision, posting a 2-page memorandum to the Service Directorate titled “Withdrawal of Memorandum Titled, ‘Use of Agricultural Practices in Wildlife Management in the National Wildlife Refuge System’ (July 17, 2014).”²⁹ The decision, which was issued without analysis of the best available science, was challenged in federal court by the Center for Biological Diversity and Center for Food Safety on September 26, 2019.³⁰ The challenge was dismissed on standing grounds on September 24, 2020.³¹

²⁵ See, e.g., *National Family Farm Coalition et al. v. EPA*, 960 F.3d 1120, 1144-45 (9th Cir. 2020) (vacating EPA approval of dicamba products sprayed over-the-top of soy and cotton engineered with resistance).

²⁶ Douglas, MR and Tooker, JF. 2015. Large-scale deployment of seed treatments has driven rapid increase in use of neonicotinoid insecticides and preemptive pest management in U.S. field crops. *Environ. Sci. Tech.* 49 (8), pp 5088–5097.

²⁷ *Id.*

²⁸ *Id.*

²⁹ Service, Memorandum by Gregory Sheehan to the Service Directorate, “Withdrawal of Memorandum Titled, ‘Use of Agricultural Practices in Wildlife Management in the National Wildlife Refuge System’ (July 17, 2014)” (Aug. 2, 2018), https://www.biologicaldiversity.org/campaigns/pesticides_reduction/pdfs/2018-8-2-FWS-memo-GMO-Neonics-on-wildlife-refuges.pdf.

³⁰ *Center for Biological Diversity v. Bernhardt*, 1:19-cv-02898 (D.D.C. filed Sept. 26, 2019).

³¹ *Center for Biological Diversity v. Bernhardt*, No. 19-02898, 2020 U.S. Dist. LEXIS 175054 (D.D.C. Sept. 24, 2020).

d. Other Agricultural Pesticide Uses in National Wildlife Refuges

Nationwide, every region of the Refuge System except Alaska allows farming practices—many of which include the use of pesticides on commercial crops like corn, soybeans, and sorghum. As fully explained in a report published in 2016 and updated in 2020 by the Center for Biological Diversity, these commercial farming uses of our national wildlife refuges have resulted in massive amounts of highly toxic pesticides being applied—including by aerial and broadcast spraying—to refuge lands, including pesticides that imperil endangered and threatened species, as well as other wildlife and refuge resources.³² The Center’s report is based off of public records produced by the Service in response to requests made under the Freedom of Information Act, 5 U.S.C. § 552.

According to the updated 2020 report, for example, uses of some of the most dangerous agricultural pesticides surged on refuges between 2016 and 2018, including an 89% increase in dicamba use, a 74% increase in 2,4-D use, and a 100% increase in paraquat dichloride (paraquat) use.³³ As discussed above, the 2016 approval of dicamba-resistant crops dramatically increased the use of dicamba in agriculture, which previously was little used due to its volatility and drift problems. In fact, dicamba has been called the “most controversial agrochemical product launched in the past decade” due to its tendency to drift and damage neighboring fields and natural areas, as well as its cancer risks and its threat to the imperiled monarch butterfly and other wildlife populations.³⁴ Compounded on this, 2,4-D, which has had a similar significant increase in agricultural use based on the introduction of 2,4-D-resistant seeds, is known to be toxic to mammals, birds, amphibians, crustaceans, reptiles, and fish, and is likely to jeopardize the continued existence of endangered and threatened salmonids.³⁵ And even further, paraquat is known to be toxic to crustaceans, mammals, fish, amphibians, and mollusks, and is so lethal (including to humans) that it is banned in 46 countries, including the European Union.³⁶

Adding to the inherent risks of using such toxic pesticides (in such toxic amounts) in the Refuge System, the Service also allows these three and other pesticides to be aurally applied to refuge agricultural fields.³⁷ In 2018, 144,788 acres of refuge lands were aurally sprayed with 129,732 pounds of pesticides, a 35% increase over the acreage sprayed in 2016.³⁸ Aerial spraying is a concerning practice because the pesticide is applied at a greater height and can therefore be more prone to movement from wind and other climatic pressures. Pesticides that are aurally sprayed can lead to exposure of nontarget insects, plants, and other species, including species the refuges were established to protect.

³² See generally Ctr. for Biological Diversity, *No Refuge: How America’s National Wildlife Refuges Are Needlessly Sprayed with Nearly Half a Million Pounds of Pesticides Each Year* (May 2018),

https://www.biologicaldiversity.org/campaigns/pesticides_reduction/pdfs/No-Refuge.pdf; Ctr. for Biological Diversity, *No Refuge: More Acres of America’s National Wildlife Refuges Are Being Doused in Harmful Pesticides* (Aug. 2020), https://www.biologicaldiversity.org/campaigns/pesticides_reduction/pdfs/No-Refuge-Report-2020.pdf.

³³ Ctr. for Biological Diversity, *No Refuge: More Acres of America’s National Wildlife Refuges Are Being Doused in Harmful Pesticides*, 1 (Aug. 2020), https://www.biologicaldiversity.org/campaigns/pesticides_reduction/pdfs/No-Refuge-Report-2020.pdf.

³⁴ *Id.* at 7-8.

³⁵ *Id.* at 10-11.

³⁶ *Id.* at 12.

³⁷ *Id.* at 7.

³⁸ *Id.*

II. Requested Action

The widespread use of pesticides for agricultural purposes on national wildlife refuges conflicts with the mission of the Refuge System and creates a legacy of chemical pollution that threatens the long-term health of these essential ecosystems. To ensure the preservation of the biological integrity, species diversity, and overall health of our country's national wildlife refuges, the use of dangerous pesticides and agricultural practices – such as growing genetically engineered crops for commercial agricultural purposes – should be discontinued in the Refuge System. We, therefore, respectfully request that you:

1. Act immediately to withdraw the August 2, 2018 memorandum by Gregory Sheehan to the Service Directorate entitled “Withdrawal of Memorandum Titled, ‘Use of Agricultural Practices in Wildlife Management in the National Wildlife Refuge System’ (July 17, 2014)” and reimplement the July 17, 2014 memorandum by James Kurth to Regional Refuge Chiefs entitled “Use of Agricultural Practices in Wildlife Management in the National Wildlife Refuge System,” and
2. Act promptly to initiating formal rulemaking procedures to eliminate all non-essential uses of genetically engineered crops and chemical pesticides, including but not limited to neonicotinoid pesticides, for commercial agricultural purposes on these critical public lands. We request that the Service take this action by amending 50 C.F.R. § 29.2 to include the following language: “No cooperative agreement for the purpose of crop cultivation shall be entered into without including an express condition prohibiting the use of chemical pesticides or genetically engineered crops except in emergency circumstances.”

While these actions are ongoing, we ask that you apply a more rigorous review and strict scrutiny to ongoing use of agricultural pesticides in the Refuge System by, for example, requiring *all* pesticide use proposal (PUP) requests to undergo Headquarters review (thus removing review authority from Project Leaders and Regional IPM Coordinators, and shifting it completely to the National IPM Coordinator).³⁹ Further, as part of the risk analysis conducted during the PUP review process, the PUP reviewer should be required to take into consideration the full suite of impacts to species and refuge resources from all of the pesticides being approved for use on the refuge and on the specific cooperative farm (rather than the current system, which looks at each pesticide application in relative isolation).⁴⁰ In the alternative, the Service could place an temporary moratorium for five years on any additional approvals of pesticides for agricultural purposes on refuges while a rulemaking is being completed.

³⁹ See 569 FW 1.11(B).

⁴⁰ *Id.* (“PUP reviewer(s) examine the PUP for compliance with applicable regulations *to ensure that employees use the least risk* and the most specific and effective pesticide(s) to manage the target pest.”) (emphasis added); *see also* 569 FW 1.4(E)-(F); 601 FW 3; 517 DM 1.

III. Conclusion

The Refuge System is the *only* system of federal lands set aside specifically for the purpose of wildlife conservation. These lands were not set aside to support private, commercial agriculture endeavors, and they certainly were not set aside to become dumping grounds for toxic pesticides like dicamba, paraquat, 2,4-D, and neonicotinoids. It is therefore vital that DOI, by and through the Service, act quickly to support the mission of the Refuge System by reinstating its decision to discontinue the use of neonicotinoid pesticides and genetically engineered crops on refuges, and promptly move to phase-out all remaining non-essential agricultural uses of pesticides in the Refuge System.

Thank you for your dedicated commitment to wildlife and the National Wildlife Refuge System, and for your consideration of our requests.

Sincerely,



Lori Ann Burd
Environmental Health Director
Center for Biological Diversity



Brett Hartl
Government Affairs Director
Center for Biological Diversity

All-Creatures.org
Alliance for the Wild Rockies
American Bird Conservancy
Animal Legal Defense Fund
Animal Welfare Institute
Animals Are Sentient Beings, Inc.
Animas Valley Institute
Assateague Coastal Trust
Audubon Society of Central Arkansas
Audubon Society of Corvallis
Berkshire Environmental Action Team (BEAT)
Bird Conservation Network
Black Warrior Riverkeeper
Boulder Rights of Nature, Inc.
Cahaba River Society
Californians for Pesticide Reform
Cascadia Wildlands

Center for Food Safety
Central Maryland Beekeepers Association
Christian Council of Delmarva
Ciudadanos Del Karso
Coalition on the Environment and Jewish Life
Coast Range Association
Conservation Congress
Defenders of Wildlife
Earth Day Initiative
Eastern Coyote/Coywolf Research
Eco-Eating
Elena Saporta Landscape Architecture
Endangered Habitats League
Endangered Species Coalition
Environmental Protection Information Center
Florida Wildlife Federation

Footloose Montana
Friends of the Bitterroot
Friends of the Earth
Friends of the Sonoran Desert
Fund for Wild Nature
GARDEN, Inc.
GreenLatinos
Greenpeace US
Heartwood
Howling For Wolves
In Defense of Animals
In the Shadow of the Wolf
International Society for the preservation of
the Tropical Rainforest
Jemez Peacemakers
Jemez Valley Life Force
Kentucky Waterways Alliance
Kickapoo Peace Circle
Klamath Forest Alliance
Klamath Siskiyou Wildlands Center
LEAD for Pollinators, Inc.
League of Conservation Voters (LCV)
Living Rivers & Colorado Riverkeeper
Madison Audubon
Maine Organic Farmers and Gardeners
Association
Malama Makua
Maryland Pesticide Education Network
Minnesota River Valley Audubon Chapter
(MRVAC)
Missouri Coalition for the Environment
National Latino Farmers & Ranchers Trade
Association
Native Plant Society of the U.S. (formerly
Native Plant Conservation Campaign)
Natural Resources Defense Council (NRDC)
NH Audubon
Northeast Oregon Ecosystems
Northeast Organic Farming
Association/Massachusetts Chapter
(NOFA/Mass)
Northwest Center for Alternatives to
Pesticides
Northwest Environmental Advocates
Oasis Earth
Occidental Arts and Ecology Center

Oceanic Preservation Society
Organic Consumers Association
Pesticide Action Network North America
Predator Defense
Preserve Lamorinda Open Space
Public Employees for Environmental
Responsibility
Public Lands Project
Raptor Education Group Inc.
Raptors Are The Solution
Russian Riverkeeper
Save Our Sky Blue Waters
SAVE THE FROGS!
Sequoia ForestKeeper®
SoCal 350 Climate Action
Social Compassion in Legislation
St. Johns Riverkeeper
St. Marys EarthKeepers
Sustainable Arizona
The Safina Center
The Shalom Center
Toxic Free NC
Toxic Free North Carolina
Turtle Island Restoration Network
Upper Peninsula Environmental Coalition
Upstate Forever
Ventura Coastkeeper
Vermont Center for Ecostudies
Western Nebraska Resources Council
Western Watersheds Project
Wild and Scenic Rivers
Wild Horse Education
Willamette Riverkeeper
Wings of Wonder, raptor rehabilitation,
education & research
Wishtoyo Chumash Foundation
Wyoming Untrapped
Zero Waste Washington