



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

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In Reply Refer to:  
FWS/AES/DER/BNC/079323  
2023-0083749-S7

Sarah Dunham  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue NW  
Washington, D.C. 20460

Dear Ms. Dunham:

This letter is in response to the Environmental Protection Agency (EPA), Office of Transportation and Air Quality's May 20, 2023, letter, and accompanying Biological Evaluation (BE), requesting our concurrence that the Renewable Fuel Standard (RFS) Program: Standards for 2023–2025 and Other Changes rulemaking, also known as the “Set Rule,” may affect, but is not likely to adversely affect, 685 listed, proposed, and candidate species, 52 non-essential experimental populations and 155 designated critical habitats. EPA also made a determination of “no effect” to ESA-listed species and designated critical habitats for non-crop biofuels, such as compressed natural gas/liquified natural gas, derived from biogas and biodiesel, and renewable diesel produced from waste fats, oils, and greases.<sup>1</sup> For the reasons noted below, the U.S. Fish and Wildlife Service (“Service”) concurs that the action is not likely to adversely affect any of these ESA-listed species or designated critical habitats because the Set Rule would not result in *any* “effects of the action,” as defined under the ESA’s implementing regulations at 50 C.F.R. § 402.02.<sup>2</sup>

In this response, we first explain the general analytical process that is used to determine whether an action “may affect” ESA-listed species or designated critical habitat. Then, using the

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<sup>1</sup> Although the Service is not required to concur on “no-effect determinations,” our conclusion in this concurrence letter effectively adopts EPA’s “no effect” finding for non-crop biofuels. Based on information in EPA’s BE, the Service concludes the Set Rule would not result in *any* “effects of the action.”

<sup>2</sup> Although EPA requests concurrence on its “not-likely-to-adversely-to-affect” determinations for ESA-listed species and designated critical habitats, the Service determines that EPA’s action will have no effect on ESA-listed species or designated critical habitats. Logically, if a federal action will have “no effect” on ESA-listed species or designated critical habitats, then it follows that these species or critical habitats are not likely to be adversely affected by the action. As explained in our concurrence, the process for determining whether an action “may affect” an ESA-listed species or designated critical habitats relies upon the regulatory definition of “effects of the action.” Thus, if there are no general environmental changes stemming from a federal action that are found to meet both causation standards used to determine “effects of the action,” then a “no effect” determination is appropriate, and the action would not result in any “effects of the action.”

information in EPA's BE, we apply the analytical process for determining whether the Set Rule "may affect" ESA-listed species or designated critical habitats. In determining whether the action "may affect" ESA-listed species or designated critical habitats, our analysis focuses on the general environmental changes to the landscape, if any, that would occur from each of the crop-based feedstocks produced domestically (i.e., corn, soybeans, and canola) and that are primarily used to meet the volume standards established under the RFS program.<sup>3</sup> Using the two-part causation test for determining "effects of the action," we first evaluate, as a preliminary matter, whether information in EPA's BE indicates that general environmental changes based on land-use decisions involving corn, soybean, and canola crop production would not occur but for the action, and these changes are reasonably certain to occur. For each of these crops, we conclude that the BE contains no information indicating EPA's action will result in general environmental changes on the landscape that meet the two-part causation test (i.e., the "but/for" and "reasonably certain to occur" standards) for determining "effects of the action." Because there are no general environmental changes identified in the BE that would not occur but for EPA's action and that are reasonably certain to occur, we further conclude that the Set Rule will not result in any "effects of the action," and a determination of "no effect" is appropriate.<sup>4</sup> Further evaluation involving information specific to listed species or critical habitat is not required.<sup>5</sup>

### **The "May Effect" Analysis**

The ESA's implementing regulations require formal consultation when a federal agency's action "may affect listed species or critical habitat." 50 C.F.R. § 402.14(a).<sup>6</sup> The regulations, however, do not establish the analytical process for determining whether an action may affect listed species or critical habitat. The ESA Section 7 Consultation Handbook ("Handbook") indicates only that a "may affect" determination is appropriate when "a proposed action *may pose any effects* on listed species or critical habitat." See U.S. Fish and Wildlife Service and National Marine Fisheries Service, Final Endangered Species Act Consultation Handbook, xvi (1998).

With this Handbook guidance in mind, a stepwise process is used for determining whether a federal action may affect or, conversely, have no effect on listed species or critical habitat. Identifying the "effects of the action" is critical to this process. To that end, the first step is to assess the physical, chemical, and biotic changes from an action on the environment (i.e., general

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<sup>3</sup> Note that "general environmental changes" referenced in this letter of concurrence should not be construed as "effects of the action," the term that is defined in the ESA implementing regulations. As explained in our concurrence, general environmental changes on the landscape are identified initially to determine whether an action "may affect" ESA-listed species or designated critical habitats and, with additional inquiry, determine any "effects of the action."

<sup>4</sup> A "no effect" determination is also appropriate if the range of an ESA-listed species or designated critical habitats do not intersect with the "action area." As explained elsewhere, the "action area" is defined by the geographical reach of general environmental changes that would not occur but for the action and are reasonably certain to occur.

<sup>5</sup> Further evaluation would include, for instance, determining whether an ESA-listed species range or designated critical habitats intersect with the action area, defined as the geographical reach of general environmental changes.

<sup>6</sup> Formal consultation is required if an action may affect ESA-listed species or designated critical habitats, unless the Federal agency determines, with the written concurrence of the Service, that the action is not likely to adversely affect any ESA-listed species or designated critical habitats. 50 C.F.R. § 402.14(b).

environmental changes) using the two-part causation test contained in the regulatory definition of “effects of the action.” Under the ESA implementing regulations, “effects of the action” are defined as follows:

Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. 50 C.F.R. 402.02.

Thus, using this regulatory definition, we evaluate whether any general environmental changes would not occur, but for the action and are reasonably certain to occur. Examples of these general environmental changes on the landscape may include erosion of an embankment that creates increased sedimentation into a freshwater lake or clearcutting of trees.

Once general environmental changes that would not occur but for the action and are reasonably certain to occur are identified, an action “may pose” an effect to ESA-listed species or designated critical habitats if they are within reach of these general environmental changes. To determine whether an ESA-listed species or designated critical habitats are within reach of any of these changes found to meet the two-part causation test contained in the definition of “effects of the action,” an “action area” is developed that delineates “the area affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.” 50 C.F.R, § 402.02. Thus, the geographical reach of general environmental changes that would not occur but for the action and are reasonably certain to occur define the “action area.” If any ESA-listed species range or designated critical habitats fall within that area, the action “may pose” an effect to those respective ESA-listed species or designated critical habitats, and, therefore, a “may affect” determination is appropriate.<sup>7</sup>

If the range of an ESA-listed species or designated critical habitats fall within the action area, formal consultation would be warranted, unless the federal agency finds, and the Service concurs, that the action is not likely to adversely affect the ESA-listed species or designated critical habitats. “Not-likely-to-adversely-affect” determinations require additional biological information on how ESA-listed species or designated critical habitats respond to general environmental changes. That information is necessary to determine whether general environmental changes are wholly beneficial, so remote as to be discountable, or so minor as to be insignificant to an ESA-listed species or designated critical habitats (i.e., the bases for “not-

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<sup>7</sup> Note the Service considers the mere intersection of the action area with an ESA-listed species’ range or designated critical habitat to signify that the action “may affect” or “may pose an effect” to ESA-listed species or designated critical habitats. Additional information beyond exposure of the species or critical habitat to these general environmental changes is necessary to determine any “effects of the action.”

likely-to-adversely affect” determinations).<sup>8</sup> See *U.S. Fish and Wildlife Service and National Marine Fisheries Service, Final Endangered Species Act Consultation Handbook, 3-12 (1998)*. Accordingly, because the Service serves as the wildlife consulting experts who assist federal agencies with their responsibilities to ensure against jeopardy or adverse modification, action agencies must receive written concurrence from the Service to verify that the “effects of the action” are, for example, wholly beneficial to the species. Or, if the effects of the action are discountable, the Service must verify that the effects are extremely unlikely to occur because the species, for instance, is found in the area only during migration, and the general environmental changes occur outside migration season. Alternatively, in concurring that the effects of the action are insignificant on the species, the Service must verify that the effect on the species, for example, cannot be meaningfully measured or detected.

### **Description of EPA’s Action**

Congress created the RFS program to reduce greenhouse gas emissions and enhance energy security through expanding the Nation’s use of renewable fuels. This program was created under the Energy Policy Act of 2005 (EPAAct), which amended the Clean Air Act (CAA). The Energy Independence and Security Act of 2007 (EISA) further amended the CAA by expanding the RFS program. Under CAA section 211(o), the RFS program requires that certain minimum volumes of renewable fuel must be used in the transportation sector for all years after 2005, with the goal of replacing or reducing the quantity of petroleum-based transportation fuel, heating oil, or jet fuel. Section 211(o) contains specific renewable fuel volume targets through 2022 and provides EPA the authority for setting volumes for 2023 and beyond. Thus, EPA’s action for the current rulemaking is to establish volume requirements for the use of renewable fuels in the transportation sector for years 2023-2025.

The RFS program places an obligation on producers and importers of gasoline and diesel (hereafter referenced as “refiners”) to use certain amounts of renewable fuel to replace fossil-based transportation fuels. The standard is based on a percentage that each refiner multiplies by its gasoline and diesel production and importation to determine the volume of renewable fuel for which it is responsible (i.e., the gallons of renewable fuel mixed with fossil-based fuel for the consumer market). The RFS program does not create an obligation for any individual party (e.g., individual farmers, grain mills, renewable fuel producers, etc.) to produce or use any amount or type of renewable fuel. Instead, renewable fuel producers (e.g., those producing ethanol, soy, and canola oil) produce biofuels to meet the demands of refiners (producers and importers of fossil-based transportation fuels) for their blending obligations under RFS.

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<sup>8</sup> Effects that are wholly beneficial, discountable, or insignificant to ESA-listed species or designated critical habitats are considered to be “effects of the action.” Thus, “not-likely-to adversely-affect” determinations, which must be confirmed by the Service via written concurrences, involve, among other things, an examination of the *response* of ESA-listed species and designated critical habitats *exposed* to general environmental changes that would not occur but for the action and are reasonably certain to occur. Mere exposure to general environmental changes that meet the two-part causation test for determining “effects of the action” does not necessarily mean that the action will result in “effects of the action.”

Most relevant to our analysis of the on-the-ground effects of EPA's action (if any), the RFS program does not regulate the conduct of farmers who plant crops that can then be used as feedstock (e.g., raw material such corn, soy, or canola) to create renewable fuel. To participate in the program, renewable fuel producers (i.e., those that produce renewable fuel such as ethanol, soy and canola oil) must register with EPA, and keep records demonstrating only that the renewable fuel meets the statutory requirements that the renewable fuel is produced from renewable biomass and used as transportation fuel in the United States (i.e., refiners purchase the biofuel to mix with their fossil-based fuel). These statutory requirements do not include tracking impacts to ESA-listed species or their designated critical habitats. The program itself and the standards promulgated in this action, do not require any action by or place any other requirements on any renewable fuel producer or farmer. The production of renewable fuels, their type, and the crop-based feedstocks used for many of them, like corn, soy, and canola, are not regulated by the RFS program. The RFS standard does not mandate how individual farmers make their crop planting decisions or how much of a crop to grow. Instead, these decisions are up to individual farmers and based on many market factors such as crop prices, demand for crops, and local growing conditions. Their decisions can change from year to year depending on how market factors change over time.

The three general renewable fuel types produced in the U.S. from 2016 to 2021 include cellulosic, non-cellulosic, and conventional (i.e., ethanol) (see BE, Figure III.C-1). Feedstocks for these renewable fuel types include landfill gas (methane), agricultural digester, waste treatment plant, waste oils/fats/greases, separated food wastes, and crop-based feedstocks including agricultural residues, annual cover crops, corn oil, corn starch, soybean oil, canola oil, and grain sorghum (see BE, Table III.C-1, C-2, C-3). For years 2016-2021, crop-based feedstocks, namely corn, soy, and canola, averaged 0.4% of cellulosic, 55% of non-cellulosic, and 99.99% of conventional renewable fuels.

### **Potential General Environmental Changes from EPA's Action**

As part of the analytical process for determining whether the action "may affect" ESA-listed species or designated critical habitats, we first consider the physical, chemical, and biotic changes to the landscape (i.e., general environmental changes) from EPA's action. EPA's BE explains the types of general environmental changes that could be anticipated to result from its action. As explained in the BE, EPA's action, in theory, could lead to conversion of land to crops used to meet the increase in the renewable fuel volumes established in the Set Rule. In addition, changes in water quality could occur downstream as a result of agricultural runoff and pollution from increased conversion to croplands. Sediment, pesticides, and nutrients can be released in nearby waterbodies during the production of biofuel crops. In addition, higher levels of fertilizers, herbicides, pesticides, and fungicides could be applied on existing croplands to increase yield. With these types of general environmental changes in mind, the Service evaluated whether any of these changes would not occur but for the action and are reasonably certain to occur on the landscape.

## General Environmental Changes that would not occur but for EPA's Action

We evaluated information for each of the crop-based feedstock in the BE to determine whether the general environmental changes discussed above would not occur but for the action. Based upon our review, we concluded the BE did not identify, with any geographic specificity, locations on the landscape where land use changes would not occur but for the Set Rule. This information is necessary, as a threshold matter, to determine whether an action “may affect” ESA-listed species or designated critical habitats. It is used to delineate the geographical reach of general environmental changes that would not occur but for the action. Once the geographical reach of changes that would not occur but for the action and are reasonably certain to occur (i.e., the “action area”) is established, we then assess any ESA-listed species and designated critical habitats exposure to these general environmental changes by determining whether any ESA-listed species’ range or designated critical habitats fall within the “action area.”

Even though the BE contains estimates of the amount of crop production and increased conversion to cropland that may be attributable to the Set Rule, EPA makes clear that the agency “cannot identify with any specificity parcels of land that may be converted to cropland, or any changes in water quality that may result from such conversion, that could be the result of incremental demand for biofuels created by the RFS program.” *See* BE at 8. However, for purposes of identifying *potential* areas where land use changes that *may* be attributable to the Set Rule *could* occur, EPA “attempted” to identify areas of potential change by employing a ranking system to identify areas suitable for soybean production and used probabilistic modeling to identify available for corn ethanol and canola production. *See* BE at 233. Then, using the modeling results of areas available for the predicted increases of crop production, EPA assessed the overlap of ESA-listed species range and designated critical habitats within the areas identified for potential land use change from the Set Rule for each of the crop-based feedstocks. *See* BE at 133, 150, and 166. Thus, this area of land-use change is not defined by the reach of general environmental changes that would not occur but for the action and are reasonably certain to occur. In other words, this area does not represent the “action area” defined in ESA implementing regulations as directly or indirectly affected by the action. *See* BE at 231 (“In this Biological Evaluation, we identified the *action area where these impacts could occur* and found that 810 unique populations may be impacted by the action.”) (emphasis added). The BE stresses that these are potential areas of land use change that may be attributable to the Set Rule. *See*, e.g., BE at 233 (“Although this area is classified as available land in our analyses, we cannot determine with reasonable certainty that agricultural growth attributable to the Set Rule would occur in or near this critical habitat. Again, there are many other factors, beyond the RFS program, that influence biofuel production and land use change. Therefore, *it is possible that the RFS Set Rule alone won’t contribute to any future land use or water quality changes in or around Lincoln, Nebraska, or indeed anywhere at all.*”). (emphasis added).

EPA provides several reasons why they are unable to identify locations with any specificity in which land use changes are attributable to the Set Rule alone. First, as noted in the BE, farmers do not generally grow crops for specific end uses (e.g., earmarked for biofuel versus animal feed)

nor do biofuel producers specify how much of the fuel they produce is attributable to the RFS program rather than what they would have produced in the absence of the RFS volume standards. *See* BE at 7. EPA further points out that planting, crop marketing, and sales decisions made by farmers are the result of many market factors such as crop prices, demand for crops, and local conditions, which can change from month to month, year to year.

Second, as EPA points out, land changes, if any, estimated to be attributable to the Set Rule from each of the three crop-based feedstock would occur at a “small scale” relative to the very large geographical area that represents available land for conversion. *See* BE at 233. For example, EPA concludes that only about five percent of the ethanol market can be attributable to the Set Rule. *See* BE at 75. EPA maintains that much of the increase in ethanol production in recent years can be attributed to multiple factors other than the RFS program. Those other factors include: the phaseout of methyl tertiary butyl ether as a gasoline additive, other federal programs that required or otherwise incentivized the use of ethanol in gasoline, increases in crude oil prices, the federal excise tax credit for ethanol, State ethanol use mandates and tax incentives, and the value of ethanol as a low-cost contributor to the octane rating of gasoline. *See* BE at 80. EPA indicates these factors, other than the volume requirements of the Set Rule, are likely to continue to be primary drivers for future increases in ethanol production. *See* BE at 84-85.

The identity of the location of land use changes that would not occur but for the Set Rule is further complicated by the fact that the majority of all three crops are used in *non-biofuel* markets. According to EPA, “future increases in total corn production are likely to be driven primarily by demand for corn for non-ethanol purposes.” *See* BE at 97. Future increases in the use of corn to produce ethanol is projected to be a considerably smaller portion of the total increases in corn production. *Id.*

Likewise, soybeans and soybean oil are used in a number of different markets, each of which could influence domestic soybean production. The BE indicates that the primary uses for soybeans in the U.S. are crushing to produce soybean oil (used in a wide variety of domestic markets, including fuel, food, and industrial) and soybean meal (for domestic use as animal feed) and exports (for similar uses abroad), with a very small quantity of soybeans used for seed, feed, and other use. *See* BE at 108.

With respect to canola, the BE mentions the uncertainty in attributing future increases in canola production to the Set Rule. Like ethanol, recently enacted tax incentives may present a “demand pull” on increased production of canola in the absence of the Set Rule. *See* BE at 131. The Inflation Reduction Act contains tax incentives for sustainable aviation fuel, and canola oil can be transformed into jet fuel. *Id.*

### **General Environmental Changes Reasonably-Certain-To-Occur**

Just as the BE contained no information on the location of general environmental changes (e.g., land conversion) that would not occur but for the Set Rule, it similarly contains no information

on the location of general environmental changes that are reasonably certain to occur. As mentioned above, this information is necessary to define the geographical reach of general environmental changes that would not occur but for the action and reasonably certain to occur (i.e., the “action area”). If an ESA-listed species range or designated critical habitat falls within the geographical reach of these changes, then the action ‘may affect’ the respective species range or critical habitat.

Rather than defining the geographical reach of land-use changes that would not occur but for the Set Rule and are reasonably certain to occur, the BE provides a “potential” area where land-use changes that may be attributable to Set Rule *could* occur because suitable land is available for conversion. Throughout the BE, EPA emphasizes that the potential environmental changes (e.g., land conversion) described in the analysis are not reasonably certain to occur, and, in fact, may not occur at all. *See* BE at 11, 13, 133, 160-61, 185, 234. In light of the significant amount of uncertainty at each level of the analysis and the conservative assumptions that underlie each of the steps, EPA acknowledges that the analysis *likely overestimates* the land use changes attributable to the Set Rule’s volume requirements. *See* BE at 121 and 232. As explained by EPA, the conservative assumptions applied at each step of the analysis “compound upon each other,” resulting in “an over-projection of land-use change potentially attributable to the SET rule.” *See* BE at 232.

Appendix A of EPA’s BE illustrates the complex causal chain of steps that occur between EPA issuing the Set Rule’s volume requirements and on-the-ground, land-use changes. As explained in the BE, there are uncertainties at each step of the causal chain, demonstrating that while these changes may potentially occur as a result of the Set Rule, none of the changes are reasonably certain to occur. For example, taking a highly conservative approach, EPA assumed that the entire increase of renewable fuel demand attributable to the Set Rule would result in a corresponding increase in domestic production. However, as explained in the BE, the increase in consumption of biofuels could be fulfilled by decreasing biofuel exports or increasing imports of biofuels. *See* BE at 232. Consequently, as EPA explains, the actual impact from biofuel production could be zero, as additional plantings or additional land conversion to agricultural may not be needed.

Similarly, because corn, soybeans, and canola used to produce the volumes of renewable fuels potentially attributable to the Set Rule can come from multiple sources, the necessary feedstocks could derive from a reduction in exports or diversion of feedstocks away from food and feed. Thus, as EPA acknowledges, it is possible that the increased volumes set by the Set Rule would lead to zero acres being converted; therefore, the BE indicates that EPA cannot say with reasonable certainty that any ESA-listed species or designated critical habitats identified in the analysis will be impacted. In addition, in the case of soybeans, for example, the BE indicates that it is possible that the increased volumes that may be attributable to the Set Rule could be fulfilled by increasing the yields on existing crops without the need for additional land conversion. *See* BE at 233. However, as EPA notes, the BE took a conservative approach (likely overestimating



the impact of the Set Rule) by assuming that the increased volumes would be fulfilled by newly converted soybean acres. *Id.*

## **Conclusion**

The Service concurs with EPA's determination that the Set Rule is not likely to adversely affect any ESA-listed species or designated critical habitats. There is no information in the BE identifying land-use changes that would not occur but for the Set Rule and are reasonably certain to occur. For example, future increased demand for biofuels and any accompanying land-use changes to fulfill those demands would exist without the Set Rule, and there is no information in the BE identifying the location of any land-use changes that would not occur but for the Set Rule.

EPA also indicates that the potential land-use changes identified in the BE, which may be attributable to the Set Rule, are not reasonably certain to occur, and in fact, may not occur. EPA's BE refers to the various uncertainties in each step of the causal change between the promulgation of the Set Rule and on-the-ground land-use changes. For example, the Set Rule may not lead to any land use changes because the increased volumes could be fulfilled through reductions in exports or diverting feedstocks from food or feed markets.

As part of the Service's evaluation of whether an action "may affect" ESA-listed species or designated critical habitats (as well as identifying the "effects of the action"), the Service initially identifies general environmental changes on the landscape that would not occur but for the action and are reasonably certain to occur. Once those changes are identified, the Service uses the geographical reach of the changes to define the "action area." If an ESA-listed species' range or designated critical habitat falls within the "action area," a "may affect" determination is appropriate. In the case of a "may affect, not likely to adversely affect" determination, further evaluation into the manner in which ESA-listed species or designated critical habitats are affected would be required.

Given the BE does not contain information identifying any land-use changes that would not occur but for the Set Rule and that are reasonably certain to occur, the "action area" cannot be delineated to determine whether any ESA-listed species' range or designated critical habitats would fall within the reach of these land use changes. The Service, therefore, concurs with EPA's finding that the Set Rule is not likely to adversely affect ESA-listed species or designated critical habitats because we find EPA's action will have no effect.

This concludes informal consultation on the RFS Set Rule. As stated at 50 CFR §402.16, reinitiation of consultation is required and shall be requested by EPA or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and: If new information reveals effects of the action that may affect ESA-listed species or designated critical habitats in a manner or to an extent not previously considered; If the identified action is subsequently modified in a manner that causes an effect to ESA-listed species or

designated critical habitats that was not considered in the written concurrence; or, If a new species is listed or critical habitat designated that may be affected by the identified action. The Service appreciates your coordination throughout the informal consultation process. If you have any questions, please contact Keith Paul of my office at (703) 358-2675.

Sincerely,

Craig Aubrey  
Chief, Division of Environmental Review  
Ecological Services

#### Literature Cited

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