July 11, 2016

Ms. Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C., 20460

Submitted via regulations.gov

RE: Comments from ActionAid US, Clean Air Task Force (CATF), Environmental Working Group (EWG), and National Wildlife Federation (NWF) on the U.S. Environmental Protection Agency's Proposed Rule - "Renewable Fuel Standard Program: Standards for 2017 and Biomass-Based Diesel Volume for 2018" 81 Federal Register 34778 (May 31, 2016); EPA-HQ-OAR-2016-0004

Dear Administrator McCarthy:

As national environmental, conservation, and development organizations, we are pleased to provide joint comments on the Environmental Protection Agency's (EPA) proposed rule - Docket No. EPA-HQ-OAR-2016-0004 - "Renewable Fuel Standard Program: Standards for 2017 and Biomass-Based Diesel Volume for 2018" that was published in the Federal Register at 81 Fed. Reg. 34778 on May 31, 2016. Our groups represent millions of members who are concerned with fighting global warming, protecting human health, promoting human rights, preserving natural habitats, and advocating for clean energy. We believe that setting appropriate volumes for the Renewable Fuel Standard (RFS) and effectively implementing the habitat-conversion protections in the RFS are critical to achieving these goals. In addition to these joint comments, individual organizations will submit more detailed comments concerning areas specific to their expertise.

Our comments focus on five primary aspects of the proposed rule, which are detailed in each respective section below:

- Ensuring 2017 overall RFS - and specifically conventional ethanol – volumes reflect current market realities and do not further incentivize increased production of corn ethanol, a biofuel that has created numerous environmental problems and increased food prices.
- Describing a range of severe environmental harms associated with the RFS, each of which further justifies EPA's use of its waiver authority to reduce RFS volumes.
- Reminding EPA of its requirement to comprehensively adjust future RFS volume mandates based on the "reset" provision.
- Ensuring 2018 volume requirements for biomass-based diesel and 2017 volume requirements for advanced, conventional, and overall renewable fuels do not further incentivize biodiesel and vegetable oil production and in effect, result in increased demand for palm oil which has numerous social and environmental problems.
- Last but certainly not least, stringently implement requirements in the RFS for biofuel feedstocks to be derived from "renewable biomass" instead of unlawfully allowing environmentally destructive land use change to occur – an unintended consequence Congress foresaw when it enacted the Energy Independence and Security Act of 2007.

As detailed below, the undersigned groups believe that these concerns warrant a reduction in the final 2017 renewable volume obligations (RVOs) for advanced biofuels and total renewable biofuels as well as

a reduction in the 2018 RVO for biomass-based diesel, specifically to ensure that the advanced biofuels gap is not backfilled with food-based biofuels.

[I] Overall RFS and Conventional Volumes Should Reflect Current Market Realities and Negative Environmental Impacts of Corn Ethanol Production

The proposed RVO for 2017 would require 14.8 billion gallons of conventional biofuels (i.e. corn ethanol), an increase of 300 million gallons over 2016 but 200 million gallons below the statutory level of 15 billion gallons. This proposed volume (and the RVO for total renewable fuels) should be reduced given the numerous environmental problems with corn ethanol, in addition to current market constraints which limit the amount of ethanol that can safely be blended into the current gasoline supply (approximately 10%, or E10).

Corn ethanol expansion would only exacerbate negative impacts on the environment, public health, wildlife habitat, and food security that have occurred since the RFS was greatly expanded in 2007 (see Section II for more information on environmental impacts):

- Millions of acres of native grasslands, forests, and wetlands have been converted to intensive row crop and biofuel feedstock production since 2007, including land use conversion that is prohibited by law, with negative impacts on the climate, wildlife habitat, water and air quality, and other environmental indicators.
- Increased corn acreage (to meet a larger corn ethanol mandate) has resulted in increased nitrogen fertilizer applications, which leach into water supplies, pollute drinking water, and result in worse health, particularly for residents in the Corn Belt.
- Wildlife habitat has shrunk significantly since 2007 with the large loss of grasslands and wetlands acres, not to mention pasture, stream buffers, forests, and other sensitive land.
- Instead of decreasing greenhouse gas (GHG) emissions, current corn ethanol production may actually increase carbon emissions.
- Food security risks due to higher commodity prices related to increased demand for corn ethanol and substitute crops.

[II] Consideration of Environmental Trigger to Reevaluate RFS Volumes via Waiver Authority

As discussed above, there is ample and growing evidence for EPA to lower its final 2017 RVO for total renewable fuels given corn ethanol's negative impacts on the environment, climate, and food security. In setting the annual RVOs, EPA has invoked its general waiver authority under Clean Air Act Section 211(o)(7)(A)(ii) to waive down the volume requirement for total renewable fuel, on the basis of its "determination that there is an 'inadequate domestic supply' of total renewable fuel in 2017."[1] EPA points to its finding of inadequate domestic supply as partial authority for the volume adjustments in the 2016 final rule and the 2017 proposed rule, arguing that the total renewable fuel requirement cannot be met in the absence of "additional volumes … from non-ethanol cellulosic biofuel, non-ethanol advanced biofuels other than biomass-based diesel (BBD), and non-ethanol conventional renewable fuels other than biodiesel and renewable diesel."[2]

However, as Collin O'Mara, CEO of the National Wildlife Federation, argued in his written testimony for the recent House Energy and Commerce Committee hearing on the RFS,

[1] 81 Fed. Reg. 34778, 34785-86 (May 31, 2016).
[2] *Id*. at 34786/3.

> "Neither [the 2016 final RVO rule or 2017 proposed rule] considers the environmental impacts of such high levels of corn production to produce the required renewable fuel volumes. An accurate assessment of the environmental impacts (habitat loss, impaired waters, etc.) warrants a reduction in next year's required volumes, not an increase. Already, this year's corn crop is predicted to be the largest since 2013, making it the third largest since 1944.[3] Additional signals that EPA intends to further raise the demand for corn will only increase the incentive for farmers to expand production beyond lands already under cultivation and set new records. Instead, EPA should reduce next year's required volumes below the "blend wall" to ameliorate the environmental damage being caused on the landscape by sending a market signal that the demand for corn ethanol is declining."[4]

If EPA conducted an accurate assessment of the RFS's negative environmental impacts, as called for by O'Mara, it would find that the conditions exist for EPA to invoke its waiver authority under Section 211(o)(7)(A)(i) on the basis that the program is severely harming the environment of the United States.[5] At a minimum, the environmental damage associated with the RFS provides EPA with an additional basis for significant reductions to the final 2017 RVOs for advanced biofuels and total renewable biofuels as well as to the 2018 RVO for biomass-based diesel.

The severe negative environmental impacts of increased corn ethanol production – on water quality, public health, land use, wildlife habitat, and the climate - are discussed in turn. Some of these impacts were detailed in EPA's First Triennial Report to Congress from 2011, but even though the law requires EPA to assess biofuels' impacts on the environment every three years, a follow-up report has not been released.[6] We urge EPA to follow the law and provide an updated assessment to Congress given that the second report is already two years overdue.

Corn Expansion and Its Negative Impact on the Landscape

The expansion of biofuels required by the RFS has undeniably contributed to an expansion in corn and other crop acreage across the U.S. since 2007. The U.S. Department of Agriculture (USDA) estimates that corn acreage this year will rise by 6% from last year, making this the largest crop by acreage since 2013 and the third largest since 1944.[7] The portion of the U.S. corn crop devoted to ethanol instead of other uses like food and animal feed rose from 9% before the RFS, to about 40% today.[8] Soybean acres, which are commonly used in a crop rotation with corn, also increased from 62.9 million acres in 2007 to 75.9 million acres in 2012, and the portion of U.S. soybean oil production devoted to biodiesel is now at

[3] US Department of Agriculture, *Prospective Plantings* (March 31, 2016) (http://www.usda.gov/nass/PUBS/TODAYRPT/pspl0316.pdf).
[4] Collin O'Mara, CEO of National Wildlife Federation, *Testimony before the House Energy and Commerce Committee's oversight hearing on the Renewable Fuel Standard* (June 22, 2016) (http://docs.house.gov/meetings/IF/IF03/20160622/105101/HHRG-114-IF03-Wstate-OMaraC-20160622.pdf).
[5] CAA 211(o)(7)(a)(i).
[6] US Environmental Protection Agency. 2011. *Biofuels and the Environment: the First Triennial Report to Congress (2011 Final Report).* (https://cfpub.epa.gov/ncea/biofuels/recordisplay.cfm?deid=235881).
[7] US Department of Agriculture, *World Agricultural Supply and Demand Estimates* (June 10, 2016) (http://www.usda.gov/oce/commodity/wasde/latest.pdf).
[8] US Department of Agriculture Economic Research Service, *Corn Use Data* (2016) (http://www.ers.usda.gov/media/866543/cornusetable.html).

24%.[9] Total crop acreage for corn and soybeans grew 8.1 million acres during the first five years of the RFS2.

Much of this cropland expansion occurred on native grasslands, wetlands, highly erodible land, former pasture, Conservation Reserve Program (CRP) land, and other sensitive acres, as several recent studies have found:

- Researchers at the University of Wisconsin-Madison found that from 2008-2012, at least 7.3 million acres of non-cropland were converted into agricultural production, 2 million from land that had never been farmed before (or had not been for at least 20 years).[10] The majority of new cropland (77%) was taken from grassland and pasture, with most conversion from highly erodible acres in the Dakotas, Minnesota, and the Corn Belt. As the research found, "this conversion emitted as much carbon dioxide as 23 coal-fired power plants running for a year," or an additional 14 million cars on the road.[11]
- The cropland expansion from the Univ. of Wisconsin study mirrors previous USDA estimates, including changes between the 2007 and 2012 Censuses of Agriculture, the National Agricultural Statistics Service survey, and USDA's Natural Resources Inventory.[12]
- USDA's Farm Service Agency's data on cropland conversion from 2011 alone found that 400,000 acres of new land were brought into crop production, including corn and soybean acres.[13]
- A 2016 study by researchers at USDA's Economic Research Service found that the addition of corn ethanol facilities to certain areas was correlated with increased corn plantings within 100 km.[14]
- A 2013 study by researchers at South Dakota State University found that high crop prices from 2006 to 2011 caused producers to tear up 1.3 million acres of grasslands in the Dakotas, Nebraska, Iowa, and Minnesota to plant to corn and soybeans.
- A 2013 EWG study documented that 23 million acres of grassland, shrubland, and wetlands were converted into crop production nationally between 2008 and 2011.[15]

Continuing to raise the mandated level of conventional biofuel will only add pressure for farmers to increase corn production further, and since yield improvements have failed to keep up with increased corn demand since 2007, this increased production will be realized through increased corn acreage. The production and yields of corn will likely be negatively affected by climate change, but these yield reductions are not taken into account in any life cycle analyses of the carbon intensity of the fuel. A recent University of Minnesota study found that corn yields will likely will fall between 15% and 50%

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[9] US Department of Agriculture, *World Agricultural Supply and Demand Estimates* (June 10, 2016) (http://www.usda.gov/oce/commodity/wasde/latest.pdf).

[10] Tyler Lark, *et al.* 2015. Cropland Expansion Outpaces Agricultural and Biofuel Policies in the United States. *Environmental Research Letters* 10. DOI: 10.1088. (http://iopscience.iop.org/article/10.1088/1748-9326/10/4/044003/meta).

[11] *Id*.

[12] U.S. Department of Agriculture, *Summary Report: 2010 National Resources Inventory* (2013). (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1167354.pdf).

[13] U.S. Department of Agriculture Farm Service Agency, *Cropland Conversion* (July 31, 2013) (http://www.fsa.usda.gov/FSA/webapp?area=newsroom&subject=landing&topic=foi-er-fri-dtc).

[14] M. Motamed, L. McPhail, and R. Williams. 2016. Corn Area Response to Local Ethanol Markets in the United States: A Grid Cell Level Analysis. *American Journal of Agricultural Economics.* (http://ajae.oxfordjournals.org/content/early/2016/02/12/ajae.aav095.abstract).

[15] Environmental Working Group. 2014. *Ethanol's Broken Promise: Using Less Corn Ethanol Reduces Greenhouse Gas Emissions*. (http://www.ewg.org/research/ethanols-broken-promise/emissions-land-use-change).

by the middle to the end of this century.[16] Continuing to direct 40% percent of the domestic supply of U.S. corn to ethanol will worsen food security concerns, and increase the carbon intensity of ethanol derived from corn grain.

Water Quality and Quantity and Impacts on Public Health

As U.S. corn acres increased after 2007, the amount of nitrogen fertilizer and pesticides applied to cropland increased[17] (since corn is currently the most input-intensive crop) with negative impacts on water quality and quantity. Growing more corn to meet requirements set by the RFS has led farmers to switch from corn-soybean rotations to continuous corn. Changing from a corn-soy rotation to continuous corn will either reduce yields, or will result in much higher fertilizer use due to soil nitrogen depletion. In the U.S., farmers use about 29 times more fertilizer per acre for corn than soybeans.[18]

Greater runoff of fertilizer and pesticides has impaired both local waterways and major rivers such as the Mississippi. Nitrate and nitrite concentrations in the Mississippi River have been higher than average so far in 2016, according to the U.S. Geological Survey.[19] Louisiana State University Professor Eugene Turner estimates nitrate concentrations in the Mississippi for the month of May 2016 were near all-time highs.[20] Nitrate runoff contributes to hypoxia, also known as the "Dead Zone," in the Gulf of Mexico, which makes marine habitats in the Gulf inhabitable to living things. Drs. Turner and Rabalais estimate that this year the Dead Zone will be 29% larger than average, which is also larger than the size of last year's Dead Zone.

Nitrates also pose a threat to human health. Several studies have linked nitrates in drinking water below the level set by the Safe Drinking Water Act with elevated risk of some types of cancer. A 2010 study led by Dr. Mary Ward of the National Cancer Institute found that public water supplies high in nitrates were linked to a more than *doubling of thyroid cancer risk.*[21] And in a 2001 study led by Peter Weyer at the University of Iowa, nitrate contamination in water was associated with almost tripling the risk of bladder cancer and almost doubling the risk of ovarian cancer.[22]

Nitrate removal is also very expensive to water utilities. The Des Moines Water Works contends that it used its nitrate removal facility for 74 days in 2013, at a cost of close to $1 million.[23] Last year, the

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[16] Hong Xu, Tracy Twine, and Evan Girvetz. 2016. Climate Change and Maize Yield in Iowa. *PLoS ONE* 11(5): e0156083. DOI: 10.1371. (http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0156083).
[17] U.S. Department of Agriculture Economic Research Service, *U.S. Plant Nutrient Use by Corn, Soybeans, Cotton, and Wheat, 1964-2012* (2011) (http://www.ers.usda.gov/data-products/fertilizer-use-and-price.aspx#26720).
[18] Joseph Fargione, Richard Plevin, and Jason Hill. 2010. The Ecological Impact of Biofuels. *Annual Review of Ecology, Evolution and Systematics* 41: 351-77. DOI: 10.1146. (http://www.annualreviews.org/doi/abs/10.1146/annurev-ecolsys-102209-144720?journalCode=ecolsys).
[19] US Geological Survey, *U.S. Geological Survey's National Streamflow Information Program (NSIP)* (2016) *(*http://waterdata.usgs.gov/usa/nwis/uv?site_no=07374000).
[20] Eugene Turner and Nancy Rabalais. 2016. *2016 Forecast: Summer Hypoxic Zone Size Northern Gulf of Mexico (*https://assets.documentcloud.org/documents/2857898/2016-Hypoxia-Forecast-LSU-LUMCON-1.pdf).
[21] M. H. Ward, *et al*. 2010. Nitrate Intake and the Risk of Thyroid Cancer and Thyroid Disease. *Epidemiology 21* (3): 389-95. DOI: 10.1097. (http://www.ncbi.nlm.nih.gov/pubmed/20335813).
[22] P.J. Weyer, *et al*. 2001. Municipal Drinking Water Nitrate Level and Cancer Risk in Older Women: the Iowa Women's Health Study. *Epidemiology* 12 (3): 327-338. (http://www.ncbi.nlm.nih.gov/pubmed/11338313).
[23] Donnelle Eller. Des Moines Register. *Toxic Algae Closing Iowa Beaches at Record Numbers* (August 14, 2015) (http://www.desmoinesregister.com/story/money/agriculture/2015/08/14/blue-green-algae-bloom/31737075/).

situation was far worse: the water utility said it used the nitrate removal facility for 177 days, costing $1.5 million. The expenses of cleaning nitrates out of drinking water end up in the water bills of Des Moines residents.

The risks of greater corn ethanol production contributing to water pollution and worsening water quantity issues are well-documented. EPA's First Triennial Report to Congress in 2011 projected that corn ethanol, under the most plausible consumption scenario, would have a negative impact on water quality.[24] The same report reiterated what numerous researchers have concluded about ethanol's water requirements – corn ethanol requires more water to produce per gallon than gasoline.[25] Ethanol expansion is also pushing cropping into more arid lands requiring irrigation, not to mention ethanol refineries already consuming large volumes of water; this increased demand for water has added more stress to areas already burdened with declining aquifers and insufficient stream flows.

Negative Impacts on Wildlife Habitat

Land use change (detailed above), coupled with water pollution and other negative environmental impacts of corn ethanol production, have further threatened already dwindling wildlife habitat in many parts of the Corn Belt and Prairie Pothole Region (Dakotas, Iowa, Nebraska, Iowa, and Minnesota). Habitat destruction has been particularly harmful to grassland nesting birds and waterfowl, since as much as 70% of the continent's population depends on the Prairie Pothole region for breeding and rearing their young. Native prairie ecosystems, which are hot beds of biodiversity, not only lose wildlife habitat when they are converted into biofuel feedstock production, but also large amounts of carbon.[26] Less than 1% of historic tall-grass prairies and 30% of mixed-grass prairies are remaining.[27] With such precious little undisturbed prairie remaining, even small losses to agriculture have an outsized importance in terms of biodiversity and carbon release. The 2015 University of Wisconsin-Madison study on land use change also found that forest lands - largely in Minnesota, western Appalachia, and in Georgia - were converted into biofuel feedstock production between 2008 and 2012, while wetland losses were centered in the Dakotas and Minnesota.[28] The study found that half of all land conversion during this timeframe could be ascribed to corn. This corroborates findings from EPA's First Triennial Report to Congress which projected that corn ethanol, under the most plausible consumption scenario, would have a negative impact on biodiversity.[29]

Current Corn Ethanol Production Increases GHG Emissions

According to EPA's own data, current corn ethanol production *increases* – not decreases – GHG emissions even though the law requires emissions to be reduced by at least 20% for conventional

[24] US Environmental Protection Agency. 2011. *Biofuels and the Environment: the First Triennial Report to Congress (2011 Final Report).* (https://cfpub.epa.gov/ncea/biofuels/recordisplay.cfm?deid=235881).
[25] *Id.*
[26] F. B. Samson, F. L. Knopf, and W. R. Ostlie. 2004. Great Plains Ecosystems: Past, Present, and Future. *Wildlife Society Bulletin* 32, 6-15.
[27] T. E. Dahl, *Status and Trends of Prairie Wetlands in the United States 1997 to 2009*, U.S. Department of the Interior, Fish and Wildlife Service, Ecological Services (2014).
[28] Tyler Lark, et al. 2015. Cropland Expansion Outpaces Agricultural and Biofuel Policies in the United States. *Environmental Research Letters* 10. DOI: 10.1088. (http://iopscience.iop.org/article/10.1088/1748-9326/10/4/044003/meta).
[29] US Environmental Protection Agency. 2011. *Biofuels and the Environment: the First Triennial Report to Congress (2011 Final Report).* (https://cfpub.epa.gov/ncea/biofuels/recordisplay.cfm?deid=235881).

biofuels (corn ethanol). Several independent researchers and environmental groups have questioned corn ethanol's ability to reduce GHG emissions, including:

- As the 2011 National Academies of Science report on the RFS concluded, the "RFS may be an ineffective policy for reducing global greenhouse-gas emissions."[30]
- The Congressional Budget Office (CBO) concluded in a 2014 report that, "available evidence suggests that using corn ethanol in place of gasoline has only limited potential to reduce greenhouse gas emissions (and some researchers estimate that it could actually increase emissions)."[31]
- In 2011, the Clean Air Task Force found, "If EPA had analyzed corn ethanol produced during 2010-2015 (when production capacity was still ramping up) rather than corn ethanol produced in 2022 (seven years after EPA expects production to level off), the Agency would have found that corn ethanol's net emissions over 30 years are approximately 28% *higher* than the emissions that would result from the use of gasoline over that same period."[32]

[III] Comprehensive Assessment of RFS Mandates through "Reset" Provision

As the advanced and total renewable volume targets set by Congress in 2007 become increasingly unreachable, EPA must consider all legally sound, environmentally protective, and socially responsible options for establishing a more rational and realistic set of annual volume requirements going forward. The "reset provision" outlined in Clean Air Act sections 211(o)(7)(F) (establishing the trigger for multi-year volume adjustments) and 211(o)(2)(B)(ii) (listing six factors the Agency must analyze when making such adjustments) will play a critical role in this process. Notwithstanding EPA's somewhat incomplete consideration of the section 211(o)(2)(B)(ii) criteria with respect to the biomass-based diesel RVO,[33] we believe that the criteria provide EPA with a framework for adjusting annual volume requirements that is more sensible and far more comprehensive than the Agency's current approach. For example, the first criterion directs EPA to consider a broader suite of environmental impacts ("air quality, climate change, conversion of wetlands, ecosystems, wildlife habitat, water quality, and water supply");[34] the fourth criterion allows EPA to take the E10 blend wall into fuller consideration; and the sixth criterion raises

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[30] Lester Lave, *et al*. 2011. *Renewable Fuel Standard: Potential Economic and Environmental Effects of U.S. Biofuel Policy* 221 (Report by the National Research Council Committee on Economic and Environmental Impacts of Increasing Biofuels Production) (internal citations omitted). (http://www.nap.edu/openbook.php?record_id=13105).

[31] Congressional Budget Office. 2014. *The Renewable Fuel Standard: Issues for 2014 and Beyond* (internal citations omitted). (https://www.cbo.gov/sites/default/files/113th-congress-2013-2014/reports/45477-Biofuels2.pdf).

[32] A fuller description of CATF's analysis of EPA's lifecycle GHG emissions data can be found in a 2013 white paper titled "Corn Ethanol GHG Emissions Under Various RFS Implementation Scenarios," as well as in CATF's "Comments on Environmental Protection Agency Regulation of Fuels and Fuel Additives: 2013 Renewable Fuel Standards – Proposed Rule." ("http://www.catf.us/resources/whitepapers/files/20130405KCATF%20White%20PaperK Corn%20GHG%20Emissions%20Under%20Various%20RFS%20Scenarios.pdf).

[33] EPA OTAQ, Memorandum: Draft Statutory Factors Assessment for the 2018 Biomass Based Diesel (BBD) Applicable Volume (2016) (https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OAR-2016-0004-0080&attachmentNumber=8&disposition=attachment&contentType=pdf); *see also* CATF, Comments on EPA's Proposed 2017/2018 RFS Volume Requirements (July 11, 2016).

[34] For analyses of the RFS's impact on the environment, *see* Lester Lave, *et al*. 2011. *Renewable Fuel Standard: Potential Economic and Environmental Effects of U.S. Biofuel Policy* 221 (Report by the National Research Council Committee on Economic and Environmental Impacts of Increasing Biofuels Production) (internal citations omitted). (http://www.nap.edu/openbook.php?record_id=13105); EPA, *Biofuels and the Environment: First Triennial Report to Congress* (2011).

social welfare impacts, including the program's effect on food security, that have plagued the RFS since its implementation. We look forward to working with EPA at it thinks through how to best utilize these criteria when making required multi-year adjustments to the total renewable fuel RVO.

[IV] Biodiesel and Other RVO Impacts on Palm Oil Production

EPA's proposed RVOs would exacerbate the social and environmental problems linked to the production of palm oil. First, the proposed biomass-based diesel RVO for 2018 would increase the overall demand for both biodiesel and, more generally, vegetable oil (from which 60% of BBD was produced in 2015, according to the U.S. Energy Information Administration).[35] Because palm oil is the marginal product in the global vegetable oil market, those demand increases will cause an expansion of palm oil production. Second, the proposed total renewable fuel RVO for 2017 would set the implied conventional biofuels mandate at a level that could be as much as 746 million gallons above the projected E10 blend wall, thereby creating a "gap" in the total renewable fuel RVO that cannot be met by ethanol.[36] As a result, analysts expect that the proposal will further increase the reliance on biodiesel as an RFS compliance option[37] which in turn will indirectly increase demand for palm oil.[38]

Palm oil production continues to contribute to peat forest destruction in Southeast Asia, especially in Indonesia and Malaysia. The upstream GHG emissions associated with the production of palm oil are significantly higher than those associated with other biofuel feedstocks, and peatland oxidation—which is the largest component in palm oil's lifecycle GHG score—occurs regardless of whether the harvested oil is sold to food markets or refined into biodiesel.[39] Palm oil production is also tied to social harms such as land grabbing as well as to the loss of critical wildlife habitat.

Furthermore, the United States has imported approximately 4.4 million barrels (185 million gallons) of BBD from Indonesia since 2013.[40] It is reasonable to assume that much of this fuel is made from palm oil.[41] Palm oil does not meet the minimum GHG reduction requirements set by Congress,[42] so by law any

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[35] Jeremy Martin/Union of Concerned Scientists, Everything You Ever Wanted to Know About Biodiesel (June 22, 2016) (http://blog.ucsusa.org/jeremy-martin/all-about-biodiesel).

[36] Scott Irwin and Darrel Good. "EPA's Proposed 2017 RFS Standards: Is a Push Still a Push?" at 4, *farmdoc daily* (6):100, Dept. of Agricultural and Consumer Economics, Univ. of Illinois at Urbana-Champaign (May 26, 2016) (http://farmdocdaily.illinois.edu/2016/05/epa-proposed-2017-rfs-standards.html); Scott Irwin and Darrel Good. "RFS Standards Beyond 2017—Biodiesel or Bust?" *farmdoc daily* (6):104, Dept. of Agricultural and Consumer Economics, Univ. of Illinois at Urbana-Champaign (June 2, 2016) (http://farmdocdaily.illinois.edu/2016/06/rfs-standards-beyond-2017-biodiesel-or-bust.html).

[37] Irwin and Good (June 2, 2016) at 4.

[38] Yin Qiu. "The Substitution Effect between Soybean Oil and Palm Oil and Global Carbon Emissions" (2014) (http://gradworks.umi.com/15/54/1554542.html).

[39] Hugo Valin, *et al*. 2015. *The Land Use Change Impact of Biofuels Consumed in the EU: Quantification of Area and Greenhouse Gas Impacts*, at 39. (https://ec.europa.eu/energy/sites/ener/files/documents/Final%20Report_GLOBIOM_publication.pdf).

[40] US Energy Information Administration, US Imports from Indonesia of Biomass-Based Diesel Fuel (http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=m_epoordb_im0_nus-nid_mbbl&f=m).

[41] *See* Stephanie Searle/International Council on Clean Transportation, An Unexpected Tax bill for Imported Palm Oil Biodiesel (January 25, 2016) (http://www.theicct.org/blogs/staff/unexpected-tax-bill-for-imported-palm-oil-biodiesel).

[42] EPA, Notice of Data Availability Concerning Renewable Fuels Produced from Palm Oil Under the RFS Program, 77 Fed. Reg. 4300, 4312-13 (January 27, 2012) (finding that BBD derived from palm oil "fails to meet the 20%

palm oil-based biodiesel used to comply with the RFS must come from grandfathered facilities.[43] It is not clear, however, that imported palm-derived BBD used to comply the RFS is made from palm oil harvested from land that was cleared prior to December 2007 and thus qualifies as "renewable biomass" per Section 211(o)(1)(I). Nor is it clear that EPA is taking appropriate and necessary steps to determine whether and to what extent grandfathered BBD refineries are using palm oil harvested from recently cleared peatlands. (EPA's lax enforcement of the "renewable biomass" requirement is discussed in the following section.) Whether or not the BBD from Indonesia is appropriately grandfathered, its emissions negatively impact the atmosphere and aggravate the environmental damage caused by the RFS.

As stated above, we urge EPA to reduce the final 2017 total renewable fuel RVO and the 2018 biomass-based diesel RVO to levels that will avoid directly or indirectly increasing the demand for biodiesel or vegetable oil.

[V] Ensure All RFS Biofuel Feedstocks Are Derived from "Renewable Biomass"

When the RFS was enacted almost a decade ago, Congress intended for no new acres of land to be converted into biofuel crop production to minimize negative impacts of land use change on the environment and food security. Through the definition of "renewable biomass," the law stated that for biofuel feedstocks (such as corn, soybeans, etc.) to comply with the RFS, they must not be produced on any land cleared or cultivated after Dec. 2007. However, due to EPA's failure to properly implement this provision, several million environmentally sensitive acres have been cultivated for the first time to produce biofuel crops. This not only has a negative impact on wildlife habitat, air quality, and water quality, but GHG emissions increase as well when native grasslands and wetlands are converted to intensive row crop production.

While the RFS was meant to prevent conversion of land, EPA developed a highly flawed approach – called "aggregate compliance" - to implement this important environmental protection that has rendered the provision useless in practice. Each year, EPA assesses changes in total agricultural land nationally and compares it to the "baseline" of 402 million acres in 2007.[44] If in the most recent year, the total number of U.S. land in agriculture exceeds the baseline, then EPA has stated it will require comprehensive reporting and other requirements for ethanol producers to verify where their feedstocks are originating. However, the current "aggregate compliance" approach has several severe flaws:

- Fails to account for large scale shifts in agricultural production that have occurred since 2007, with major increases in corn plantings, fewer acres of other food crops (which puts upward pressure on other crop prices and land use expansion elsewhere), and fewer crop rotations (more corn on corn production which increases nitrogen applications and water pollution)
- Failure to account for local or regional land use changes that have resulted from increased biofuel production
- Failure to account for acres lost to development
- Failure to account for millions of native grassland and wetland acres converted to agriculture, including biofuel feedstock crops such as corn and soybeans

reduction threshold [in lifecycle GHG emissions] required for the generation of conventional renewable fuel RINs," and falls far short of the 50% reduction threshold for generation of BBD RINs).

[43] *See* CAA section 211(o)(2)(A)(i).

[44] 40 Fed. Reg. at 14701/2.

- Taking credit for Conservation Reserve Program acres lost to row crop production but then subtracting out other former agricultural land – acres of the Agricultural Conservation Easement Program's Wetland Reserve Enhancement (ACEP-WRE) and Agricultural Land Easement (ACEP-ALE) programs, which is contradictory
- Also taking credit for acres of grazing and pasture land lost to biofuel feedstock production

It is past time for EPA to rescind its aggregate compliance approach and require that producers document that their biofuel feedstocks are sourced from qualifying land not converted after the RFS was passed. And at a minimum, past land conversion must to be accounted for in EPA's GHG accounting for corn ethanol. EPA must effectively implement the renewable biomass definition in the RFS to ensure that environmentally sensitive acres are not unlawfully converted into biofuel feedstock production at the expense of wildlife, the environment, food security, and the climate.

[VI] Conclusion

The undersigned groups urge EPA to ensure that the 2017 RVOs reflect current market realities, do not allow food-based biofuels to backfill the advanced biofuels gap, and limit expansion of corn ethanol, a biofuel that has created numerous environmental problems and increased food prices. In addition, we urge EPA to finalize 2018 volume requirements for biomass-based diesel and 2017 volume requirements for advanced, conventional, and overall renewable fuels that do not further incentivize biodiesel and vegetable oil production and in effect, result in increased demand for palm oil which has numerous social and environmental problems. We also remind EPA of its requirements to comprehensively adjust future RFS volume mandates based on the "reset" provision and to strictly implement "renewable biomass" definitions in the RFS that were enacted to limit land use change from increased biofuel production.

Thank you for the opportunity to provide comments. We hope that our remarks provide useful guidance for EPA's final decision. We appreciate your consideration.

Respectfully submitted,

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