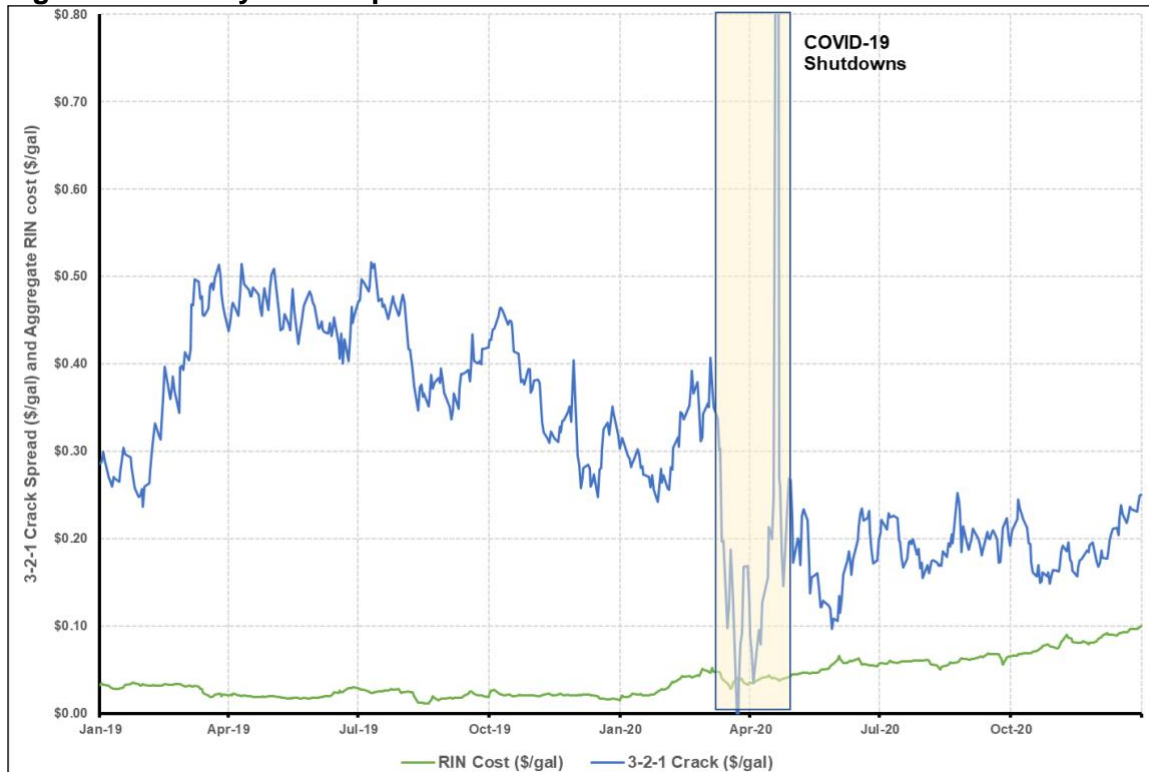


Stillwater Analysis of Requests for RFS Severe-Harm Waivers for 2019 and 2020

1. Refineries do not pay RIN costs; instead, they are generally included in the spot market price the refinery receives for fuels. As such, consumers ultimately pay for the RFS program. Over the 2019-2020 time period, however, consumers saved an average of 2.85 cents per gallon due to the RFS. Therefore, the RFS caused no economic harm to consumers or to refineries.

In 2015, on behalf of EPA, Dallas Burkholder completed a thorough analysis of the RFS RIN system. Burkholder’s analysis “suggest(s) that obligated parties are generally recovering their RIN costs in the price of the petroleum fuels they produce.”¹ Following this report, James Stock et al. found there was almost complete passthrough of RIN prices from the refinery to the retail marketplace with the exception of E85.² More recently, in 2019, Burkhardt found “RIN costs are fully passed-through to gasoline and diesel rack prices.”³ As such, there is no basis for EPA to grant severe-harm RFS waivers due to RIN prices.

Figure 1. Refinery Crack Spread and RIN Cost



Sources: OPIS, Stillwater analysis

¹ Burkholder, Dallas. 2015. A preliminary assessment of RIN market dynamics, RIN prices, and their effects. <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2015-0111-0062>

² Stock, James H., et al. The Pass-Through of RIN Prices to Wholesale and Retail Fuels under the Renewable Fuel Standard. June 2015. https://scholar.harvard.edu/files/stock/files/pass-through_of_rin_prices_1.pdf

³ Burkhardt, Jesse. The impact of the Renewable Fuel Standard on US oil refineries. April 2019. <https://doi.org/10.1016/j.enpol.2019.03.058>

Figure 1, above, displays a comparison of refinery gross margins (represented by the 3-2-1 crack spread for years 2019 and 2020⁴) to the aggregate cost per gallon of gasoline and diesel of meeting the refiner's obligation for all four RIN categories. In 2019, refinery gross margins were strong, and the cost of RINs were stable and small compared to the gross margin. In 2020, refinery gross margins did come down with the onset of COVID-related shutdowns, but slowly recovered over the course of the year; RIN costs increased over the course of the year, but more slowly than the recovery in refining margins. This indicates that refiners passed along the increase in RIN costs which they incurred over the time period.

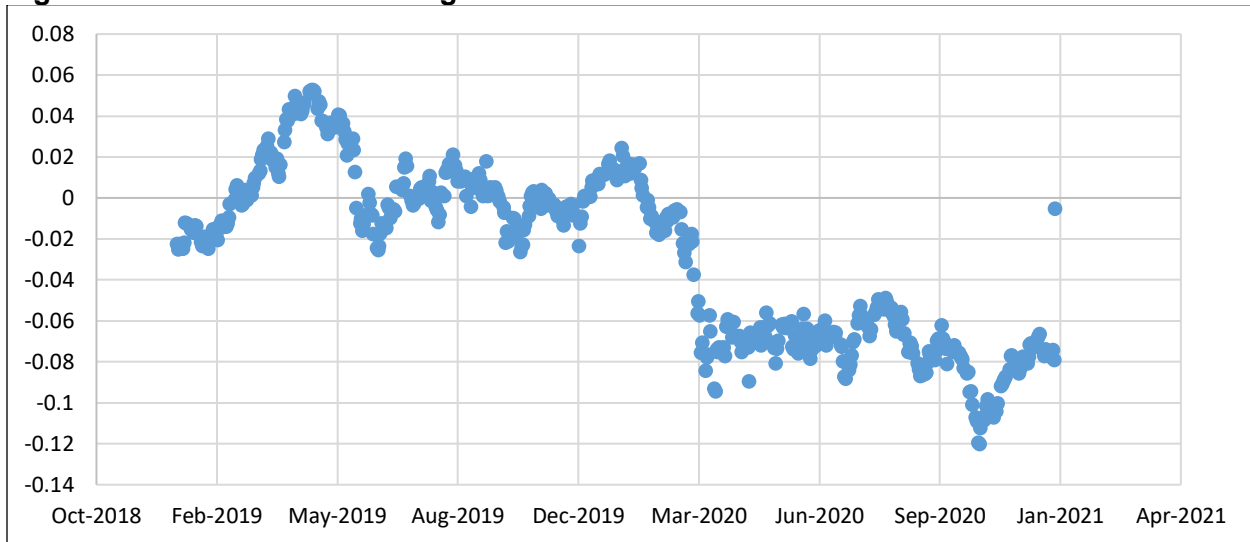
Since, as described above, refineries pass their RIN costs along to the downstream market and eventually to the consumer, the real question in terms of economic harm is whether RFS compliance causes economic harm to the consumer. In order to determine whether the ethanol-blending requirement of the RFS caused economic harm to consumers of E10 gasoline, we look at the price differential between a gallon of E10 blended in order to comply with the RFS compared to a theoretical gallon of ethanol-free gasoline (E0) which may have been sold absent an RFS-style program. As shown in Figure 2 below, for 2019 and most of 2020 regular gasoline was priced close to the price of ethanol, adjusted for the price of the associated D6 RIN⁵. The price of ethanol needs to be adjusted by subtracting the D6 RIN value because until it is blended this ethanol also has a D6 RIN attached (virtually) to it. For 2019 through January 2021, the gasoline-to-ethanol spread (less the D6 RIN) ranged from a high of almost 6 cpg to a low of -12 cpg. The average over these two years was -2.85 cpg, indicating that, on average over the 2019-2020 time period, the consumer saved 2.85 cpg with the RFS in place as compared to a world in which there was no RFS. Thus, rather than causing economic harm, the RFS program saved the consumer money on average over this time period.

In summary, for the period in question, the RFS caused no economic harm to either refineries or consumers.

⁴ The 3-2-1 Crack Spread, calculated as the price of two gallons of gasoline plus one gallon of diesel minus the price of one gallon of crude oil all divided by 3, is a widely used metric of refinery gross margins as it approximates the typical U.S. refinery product mix and feedstock cost on a per gallon of output basis.

⁵ Ethanol is commonly traded with the RIN "attached." Accordingly, the quoted price of ethanol includes both the physical gallon and the RIN. The party blending that ethanol with gasoline is entitled to separate that RIN and either sell it or use it to meet their RFS obligations. Thus, the effective price of ethanol is the quoted price less the value of the attached RIN.

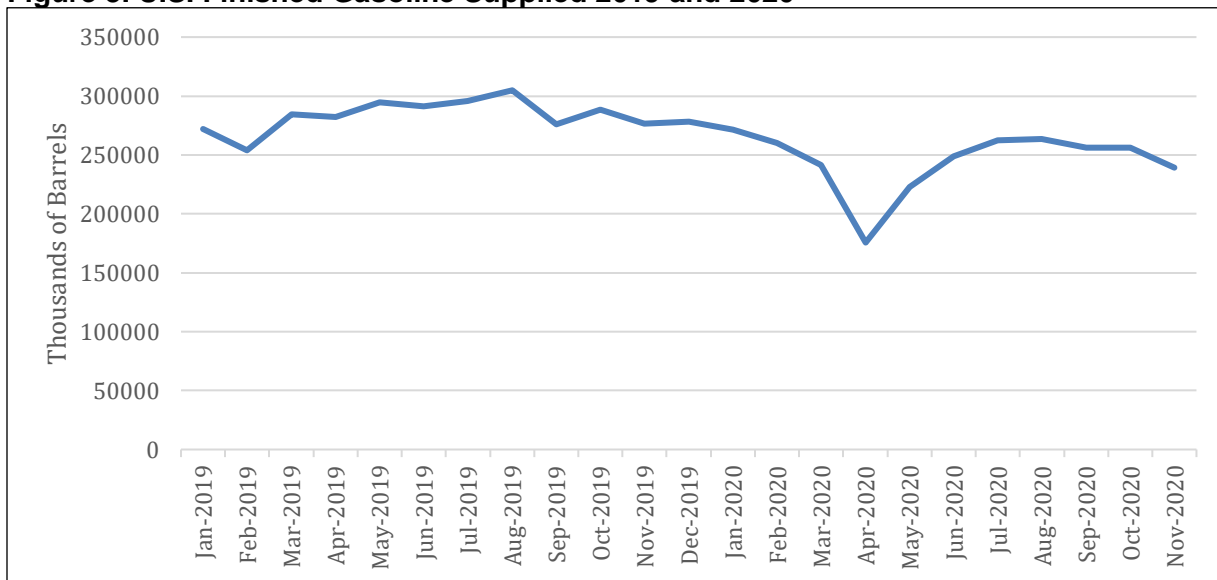
Figure 2. 10% of the Cost of Regular Gasoline Less Ethanol Net of D6 RIN Value⁶



2. Retroactively waiving the RFS requirements for 2019 and 2020 makes little sense.

No action taken in 2021 can change what already occurred in 2019 or 2020. First, the COVID-19 pandemic, whose effects on gasoline production hit the U.S. beginning in April 2020, as seen in Figure 3 below, occurred after 2019 compliance was completed in March 2020. The decline seen in Figure 3 in gasoline supplied from December 2019 through February 2020 is normal seasonal variability. It was not until mid-March 2020 that non-seasonal demand destruction began to occur. As such, the pandemic could not have impacted 2019 operations or profitability.

Figure 3. U.S. Finished Gasoline Supplied 2019 and 2020



Source: [EIA's U.S. Product Supplied of Finished Motor Gasoline](#)

⁶ This formula was developed as follows: Subtracting the RIN-adjusted price of ethanol from the price of regular gasoline yields the ethanol cost advantage over gasoline. Since there is 10% ethanol in regular gasoline, multiplying ethanol cost advantage over gasoline by 10% yields the ethanol cost advantage of a gallon of blended gasoline.

Second, even apart from the pandemic, there is no basis for granting a severe-harm waiver for a year in which compliance was already achieved without causing severe harm.

Waiving past requirements simply results in a potential windfall for refineries in 2021. For EPA to provide the refineries with individually targeted waivers of the kind the small refineries propose would result in additional profits which would upset the level refinery playing field that EPA should be supporting. In 2019, refineries made their decisions on how much gasoline and diesel fuel to produce based on the spot market prices and RIN prices at the time of production. By the end of March 2020, all of 2019's gasoline and diesel production and supply decisions had been made, and all refinery RFS compliance activity was finalized. Financial results had been reported to the public and stockholders. Our strong view is that EPA cannot grant individually targeted waivers consistent with the statute.

Each refiner, blender, or importer is required to comply with the RFS by securing sufficient RINs to cover their obligation, which is a percentage of the fuel that party produced, blended, or imported. Waiving any RFS 2019 requirement in 2021 cannot change the production, blending, or import of gasoline, diesel fuel, and renewable fuels that has already occurred. Refiners, renewable fuel producers, marketers, and retailers have already made and acted upon their production and supply decisions for 2019. The financial results of these decisions have already been accounted for, and the stock market has already adjusted the stock value for these refiners and renewable fuel producers to reflect those financial results. Waiving the RFS requirements for 2019 in 2021 based on a claim that compliance achieved long ago would cause severe economic harm is thus not only dubious but would not undo the supposed economic harm. Giving back to the refineries the RINs that they used for 2019 cannot change any of the circumstances that occurred in 2019.

Since refineries have already closed their financial accounts for 2019 and have already acquired the vast majority of RINs needed for 2020 compliance (unless the refineries chose not to acquire RINs ratably), there is very little time left for the 2020 activities of refineries to impact state or national economies. Any benefit that EPA grants these refineries as part of granting any of these RFS waiver requests results in a windfall profit for 2021.

3. RFS compliance requirements declined along with pandemic-related demand destruction.

In formulating the annual volume requirements for each of the four nested renewable fuel categories, EPA considers the statutory volume requirements and potential application of their Cellulosic and General waiver authorities in concert with projected annual demand for gasoline and diesel fuel as determined by the Department of Energy (DOE). This assessment of market volume is important at the stage of the regulatory process, during which EPA considers feasibility of the proposed standards, as the large majority of ethanol of all types (Conventional, Advanced and Cellulosic) is expected to be consumed as E10. The resultant annual rulemaking then sets both annual volumes for each of the four nested renewable fuel categories and percentage requirements. The annual volume requirements assume that actual gasoline and diesel consumption in the U.S. will equal that projected by DOE at the time of the rulemaking. The conversion of these four annual volume requirements to four percentage standards is designed to accomplish two critical objectives: first, to adjust the requirements dynamically to reflect variation of actual U.S. gasoline and diesel demand from DOE's forecast,⁷ and, secondly, to enable the proration of the total national volume requirements to specific requirements for each obligated party (whose production and market share will vary year-to-year independent of the national market volumes).

⁷ In other words, if the U.S. consumes more gasoline and diesel in a given year than the DOE forecast, the mandated volumes automatically increase and, if the U.S. consumes less gasoline and diesel in a given year than the DOE forecast, the mandated volumes are automatically decreased.

Thus, while the RFS has annual volumetric requirements for each of the four nested renewable fuel categories, which are defined in the statute and sometimes modified through waivers that EPA exercises in its annual rulemaking, those volumetric requirements are not the requirements that bind obligated parties. Rather, the binding obligations are the percentage standards for each of the renewable fuel categories, which are finalized each year in the rulemaking process described above. Each obligated party's actual annual compliance requirement for each of the four renewable fuel categories in a given year is determined by multiplying each of the four percentage standards by the sum of that party's *actual* gasoline and diesel production for the U.S. market during the compliance year. As a result, an obligated party's obligations are automatically scaled to their *actual* production during the compliance year. Thus, with the drop in 2020 product sales, every refiner's 2020 RFS obligations automatically dropped proportionally to their actual decrease in gasoline and diesel production for the U.S. market. Accordingly, every refiner, importer, and blender supplying covered fuels to the U.S. market in 2020 has already had their annual RFS obligation scaled down in proportion to their reduced volume of gasoline and diesel production. Thus, the petitioners' request to reduce the requirements "by an amount commensurate with the current projected shortfall in national gasoline and diesel consumption"⁸ was already implemented by virtue of the fact that an obligated party's obligations are already calculated as a percentage of their actual production. No further relief from their RFS obligations is warranted.

4. A majority of the RFS requirements are met with ethanol, which positively impacts refinery profitability.

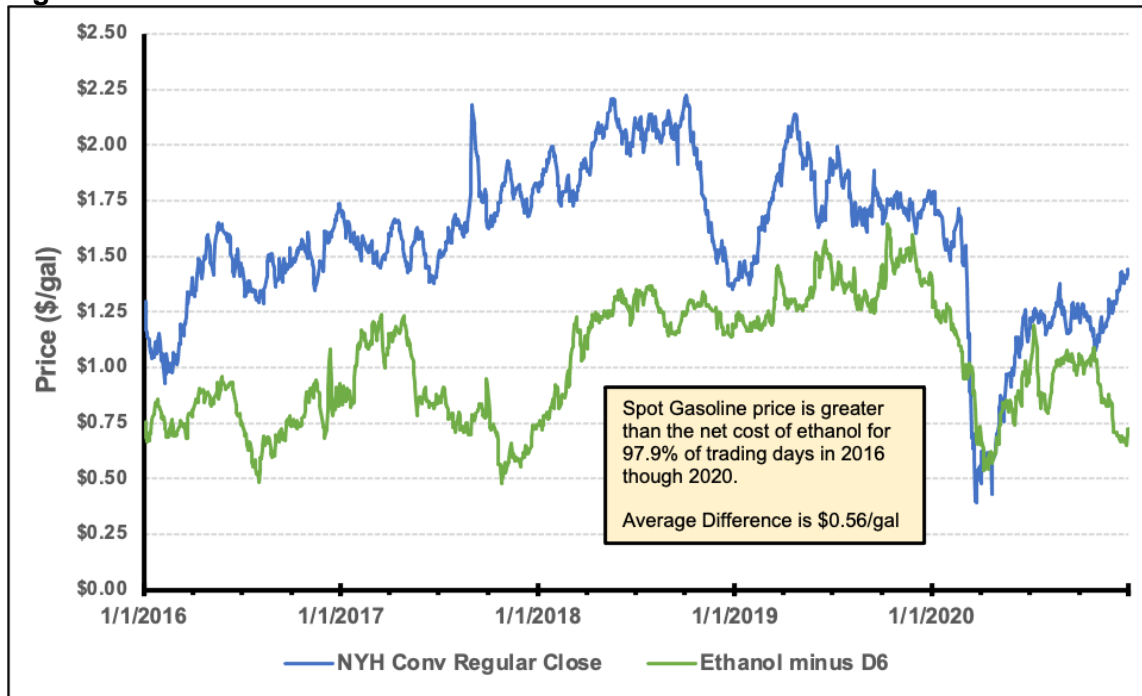
Refiners who comply with the RFS by purchasing RINs in the spot market are able to pass along that cost as established in item 1 above. Refiners who comply with the RFS by blending biofuels such as ethanol are generally able to do so at a profit. As the spot market price of ethanol includes an attached D6 RIN, the net cost of ethanol to a gasoline-ethanol blender is actually the spot price minus the current value of a D6 RIN. This cost can be compared to the spot price of gasoline for a given market. In general, this comparison will show that the net cost of ethanol is consistently below that of gasoline on a per gallon basis. Accordingly, blending ethanol reduces the cost of production of finished gasoline, even without accounting for its octane value, and thus increases refiner profitability. This occurs because the refiner is generally able to acquire ethanol at a price below that of gasoline and blend it with an 84 octane blendstock (BOB, blendstock for oxygenate blending), which costs less to produce than 87 octane gasoline, and sell the resultant blend at the price of 87 octane gasoline. So while the cost of the RIN gets passed through to the wholesale spot market, the refiner only has to produce 90% of the gasoline volume (for E10) with cheaper blendstocks.

Figure 4 below compares the spot market price for New York Harbor conventional gasoline to the net cost of New York Harbor spot ethanol over the five years from 2016 through 2020. During this time frame, the spot price of gasoline exceeded the net cost of ethanol on nearly 98% of trading days (the exception is for a brief period at the onset of COVID-19 shutdowns in 2020 when gasoline prices fell more quickly than ethanol prices), and the average difference was 56 cents per gallon.

Item 12 below describes how refiners are similarly able to profitably blend biodiesel into diesel in order to comply with that portion of their RFS obligation.

⁸ EPA Notice of Receipt of Petitions for Waiver, 76 Fed. Reg. at 5183

Figure 4. New York Harbor Gasoline and Ethanol Prices



Source: OPIS, Stillwater analysis

5. A retroactive RFS waiver for 2019 and 2020, as requested by the petitioners, would not have any impact on land use for corn used to produce ethanol and soybeans used to produce biodiesel. Thus, the proposed retroactive waivers do not address any concerns over claimed adverse impacts resulting from RFS-driven land use.

The corn used to produce ethanol in most of 2019 was planted in the Spring of 2018 and harvested in the Fall of 2018. The corn used to produce ethanol in most of 2020 was, similarly, planted in the Spring of 2019 and harvested in the Fall of 2019. All of this activity occurred prior to the onset of COVID-19. Additionally, planting decisions for 2020 were largely set during the winter of 2019-20 as individual farmers placed seed orders based on their pre-COVID assessment of the optimal use of their land given their expectations for market conditions in the Fall of 2020. Accordingly, a retroactive waiver cannot affect land use for 2019 and 2020 because that land use has already occurred.

In any event, land use for the RFS has actually declined. Analysis of U.S. crop acreage data, as published annually by the U.S. Department of Agriculture⁹ does not support NWF's assertion that RFS has increased agricultural land use in the U.S. As shown in Table 1 below, total planted acreage in the U.S. has actually declined since the beginning of the RFS. Corn acreage did initially increase to support ethanol production for the RFS but peaked in 2012 as RFS demand began to level off and steady increases in per acre yields have reduced acres planted for corn in the past eight years. Table 1 shows that the RFS has not caused an increase in U.S. crop acreage but instead caused a shift in crop acreage from wheat, hay, and other crops to corn and soybeans. Thus, NWF's assertion of increased agricultural land use due to RFS requirements in 2019 and 2020 cannot be substantiated as U.S. agricultural land use in 2019 and 2020 continued the long-term decline which began before the implementation of the RFS.

COVID-19 reduced corn use for ethanol production as ethanol demand for gasoline blending has decreased in proportion to reduced gasoline consumption, and U.S. corn ethanol plants reduced operating rates as a result. As such, if the pandemic affects land use, it will be to reduce direct and indirect land use for RFS compliance in 2021 and probably in 2022 as well because of the decline in

⁹ <https://usda.library.cornell.edu/concern/publications/j098zb09z>

the use of transportation fuel. While final figures for 2020 are not yet available, U.S. ethanol production in the first eleven months of 2020 was 12.7 billion gallons significantly reduced from the 14.4 billion gallons produced during the same months of 2019¹⁰. This 12% reduction in U.S. ethanol production was due to reduced demand associated with lower gasoline consumption resulting from COVID-19.¹¹ USDA estimates corn demand supply and demand, including that used for ethanol production, based on Marketing Years (which run from September 1st through August 31st). In their most recent estimate,¹² USDA forecasts corn demand for ethanol during the 2019/20 Marketing Year as 4,852 million bushels, down almost 10% from 5,378 million bushels used during the 2018/19 Marketing Year. USDA will make their first projection of corn acreage to be planted in 2021 in a report to be issued in March 2021.

Even in the complete absence of an RFS, ethanol would continue to be widely used in the U.S. gasoline pool due to its favorable economics and high octane. The growth in production capacity and nationwide installation of ethanol distribution and blending infrastructure which occurred with the RFS means that ethanol blending would be expected to continue at levels near current use even if waivers for future years were granted. In spite of this, land use associated with ethanol production would be expected to decline. The impacts of the pandemic on gasoline demand are expected will take at least two years to recover from. While this demand recovery is taking place, corn yields and ethanol plant efficiencies will continue to improve, which will cause direct and indirect land use factors to decrease.

Table 1. U.S. Annual Crop Acreage since 2000

Crop	Pre-RFS 2000-2007	Since RFS 2008-2020	Maximum Acreage
Corn Acres	81.0 million	90.7 million	97.1 million in 2012
Soy Acres	72.8 million	80.6 million	90.1 million in 2017
Wheat Acres	59.9 million	53.0 million	63.5 million in 2001
Hay Acres	62.2 million	55.9 million	64.5 million in 2002
All Other Crop Acres	47.0 million	38.6 million	51.9 million in 2000
Total Planted Acres	323 million	319 million	328 million in 2000

Sources: USDA, Stillwater analysis

Soybean acreage has also increased since the start of the RFS but, as illustrated in Figure 5 below, domestic demand for soybeans for all uses, including soybean oil for biodiesel, has been generally constant since 2000 while exports of soybeans, soybean oil, and soy meal have grown steadily to supply demands not related to the RFS.¹³

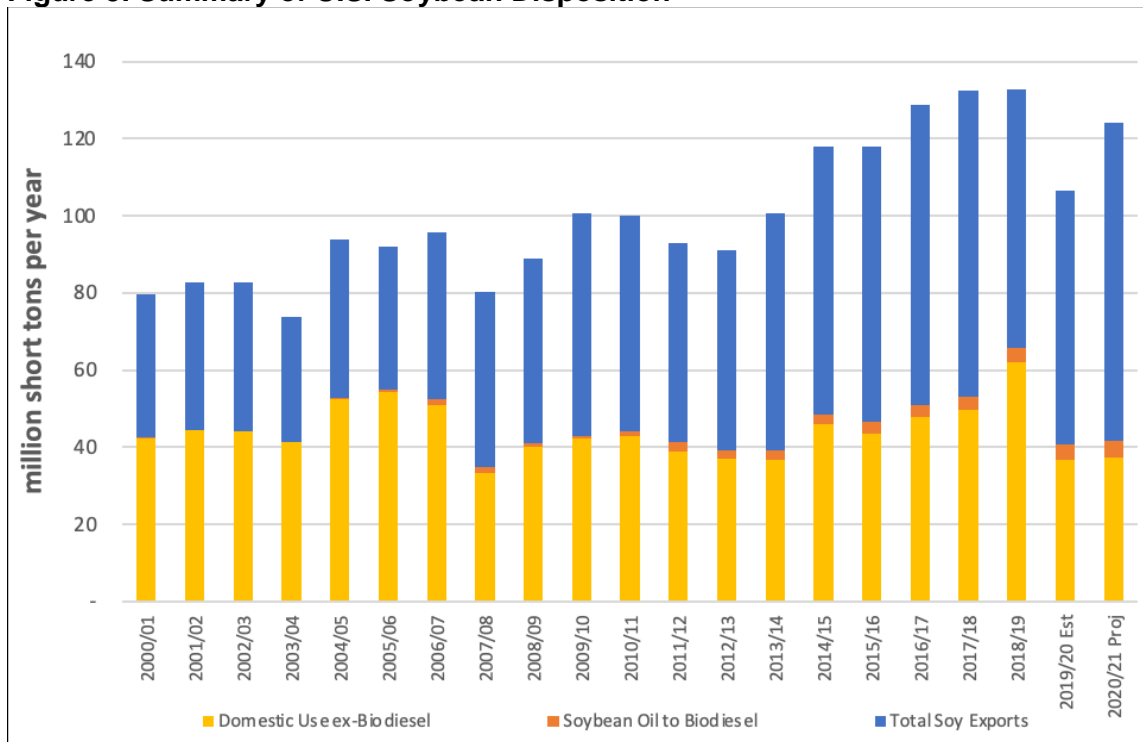
¹⁰ Data from U.S. EIA: https://www.eia.gov/dnav/pet/pet_pnp_oxy_dc_nus_mbbl_m.htm

¹¹ In addition to supplying U.S. gasoline markets, U.S. corn ethanol plants export a significant portion of their production. Additionally, as demand in domestic gasoline markets declined, a number of U.S. ethanol plants produced ethanol to supply the large increase in hand sanitizer demand due to Covid.

¹² World Agricultural Supply/Demand Estimate (WASDE) for February 2021 available at <https://usda.library.cornell.edu/concern/publications/3t945q76s?locale=en&page=34>

¹³ <https://usda.library.cornell.edu/concern/publications/3t945q76s?locale=en>

Figure 5. Summary of U.S. Soybean Disposition



Sources: USDA WASDE, Stillwater Analysis

EPA is required, under Section 211(v) of the Clean Air Act to report whether the RFS has caused any adverse impacts on air quality as a result of changes in vehicle and engine emissions attributable to the RFS. This section also requires EPA to promulgate fuel regulations, as needed, to mitigate any such air quality impacts to the greatest extent achievable. EPA released a Final Determination in fulfillment of this requirement in January 2021.¹⁴ This analysis found that, due to the 2017 implementation of the Tier 3 Motor Vehicle Emissions and Fuels Standards,¹⁵ no additional mitigations were required.

EPA is also required to periodically report to Congress on the overall impact of biofuels usage on the environment. In fulfillment of this requirement, EPA issued their Second Triennial Report to Congress on Biofuels and the Environment on June 29, 2018.¹⁶ In this report, EPA considered how the RFS impacts farmers’ decisions on crop planting and the consequent environmental impacts and concluded:

Farmers’ decisions regarding land use and management are influenced in part by market prices (e.g., future price of corn), which are in turn affected by myriad antecedent factors, such as weather and policies (Roberts et al. 2013; Hellwinckel et al. (2016); Carter et al. 2017). The dominant biofuel feedstocks in the U.S. currently are corn and soybeans; thus, the environmental effects of biofuels at this time are due to some portion of the land use and management of growing corn and soybeans. However, these feedstocks are also produced for other purposes, such as animal feed, many food and industrial products, and export. Soy, for example, is primarily grown for the meal (about 80% of the bean). The oil (20%), which gets used for food as well as biodiesel, is a by-product whose supply depends on soy meal demand.

¹⁴ <https://www.epa.gov/sites/production/files/2021-01/documents/420r21002.pdf>

¹⁵ <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-control-air-pollution-motor-vehicles-tier-3>

¹⁶ U.S. Environmental Protection Agency. Biofuels and the Environment: The Second Triennial Report to Congress. June 29, 2018. https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=IO&dirEntryId=341491

Therefore, only a percentage of the environmental consequences of growing corn and soybeans can be attributed to biofuel feedstock production.¹⁷

Review of U.S. planting and production data for corn, soybeans, ethanol and biodiesel since this report was issued shows that there has been no change to these long-term economic and technical factors since EPA issued the Second Triennial Report.

6. Historical physical realities cannot be changed by a retroactive waiver.

The production, blending, marketing, and consumption of renewable fuels in 2019 and 2020 due to the RFS cannot be undone. As a result, the retroactive waivers requested for the 2019 and 2020 RFS would have no impact on agricultural land use as the feedstock crops have already been planted and harvested as a result of decisions made by individual farmers before the onset of COVID-19. Even if that were not the case, analysis of USDA data for years 2000 through 2020 clearly show that the RFS has not been a driver for increased U.S. planted crop acreage; total acreage has been declining since before 2000, acres for corn peaked in 2012 and acres for soybeans, which are driven predominantly by export markets, peaked in 2017. Finally, the extensive U.S. build-out of ethanol production capacity, distribution and blending since before the RFS means that extensive blending of ethanol would be expected to continue even in the absence of future RFS mandates. Accordingly, no environmental benefit could be attributed to any waiver granted.

7. EPA's RFS waiver authority exists to address severe economic harm to a state, region, or the U.S. as a whole, but that threshold has not been met for these waiver petitions.

EPA's RFS waiver authority is not intended to address all economic costs to refinery owners. The severe harm intended to be addressed by the waiver is for the state, region or the U.S. as a whole, not a refinery. Even in states with high concentrations of refineries (TX, LA), those refineries represent only a small share of the economy, and any relief granted would not materially improve the economy of those states. In April 2020, governors from the states of Louisiana, Oklahoma, Texas, Utah, and Wyoming submitted letters to EPA concerning RFS waivers.

8. The 2020 COVID-19 pandemic had no effect on 2019 events.

The governors' letters are mistaken in citing support for the requests for RFS economic waivers for 2019 using as justification a claim of financial strain due to the Covid-19 pandemic which did not start until the following year. In fact, 2019 was a good year economically for the U.S., the states of Louisiana, Oklahoma, Texas, Utah and Wyoming and the refining industry. No data was presented in this letter to demonstrate "that implementation of the RFS volume requirements would severely harm the economy or environment of a State, region, or the United States, or that there is an inadequate domestic supply"¹⁸ in 2019.

For 2020, the governors' letters assume that since the pandemic and all its negative impacts occur in the same year that the RFS petitions address there must be some correlation between the two. This letter does not, however, provide data to support this connection.

The governors' letters request that these petitions be approved but do not demonstrate that approval of these petitions would, in fact, help to alleviate any of the severe harm that results from the pandemic. In fact, since 2020 is over and done, there are no steps that EPA can take to alleviate any of the claimed severe harm.

¹⁷ U.S. Environmental Protection Agency. Biofuels and the Environment: The Second Triennial Report to Congress. June 29, 2018. pg. 54. https://cfpub.epa.gov/si/si_public_record_Report.cfm?Lab=IO&dirEntryId=341491

¹⁸ U.S. Environmental Protection Agency Notice of Receipt of Petitions for a Waiver of the 2019 and 2020 Renewable Fuel Standards; <https://www.govinfo.gov/content/pkg/FR-2021-01-19/pdf/2021-01017.pdf>, page 5183

- 9. Retroactive waivers choose winners and losers, rewarding those who did not comply.** In considering the requested retroactive waivers for 2019 and 2020 RFS requirements, EPA needs to not only consider the statutory requirements for granting the requested waivers, but also weigh the value of the requested relief to the allegedly harmed parties against the impacts on other stakeholders, including all those who complied with the regulations in good faith or otherwise made business decisions on the assumption that the regulations would be enforced.
- a. Parties who acquired 2020 RINs under the assumption that EPA would enforce the RFS regulations will be financially harmed by a waiver.**
While any RINs already retired by obligated parties for compliance with the 2019 and 2020 obligations may be returned, any 2018 or 2019 RINs returned will be worthless and the volume of non-retired 2020 RINs will likely be in excess of the 20% cap on how many carryover RINs can be used for 2021 compliance, rendering them much less valuable than compliant parties spent to acquire them initially. Thus, parties who have complied with the regulations by acquiring RINs as they produced fuel for the market will be penalized compared to parties who have chosen to wait until the deadline to acquire RINs.
- b. Financial harm, if any, to refiners and obligated parties (and their stakeholders) would not be alleviated through issuance of a waiver.**
Any 2018 or 2019 RINs retired for compliance to meet the 2019 or 2020 obligations would be worthless if unretired to implement the requested waivers. Any 2020 RINs retired for compliance would still be valid for compliance with 2021 obligations (subject to the 20% maximum limit on the use of prior-year RINs for compliance with RIN obligations) but a substantial return of such 2020 RINs would greatly increase the supply of RINs for 2021 obligations and, thus, reduce their value to well below what the obligated parties spent to acquire them. Accordingly, the economic harm, if any, incurred by obligated parties and their stakeholders due to enforcement of the 2019 RFS would not be alleviated at all by the grant of the requested waivers, and for the 2020 RFS would only be partially alleviated by the grant of the requested waivers.
- c. The precedent of granting waivers retroactively would undermine incentives for parties to make future business decisions reliant on the value of RINs.**
Producers of the renewable fuels required for the achievement of the RFS annual requirements make long-term investment decisions informed, in part, by the anticipated value of the RINs generated by their production. A retroactive waiver will undermine the confidence of firms considering investment in future renewable fuel capacity, undermining the aims of the program. A significant portion of the compliance activities required by the RFS are performed by non-obligated parties who voluntarily blend and market renewable fuels with the expectation that they will be able to sell the RINs they have acquired to obligated parties who are otherwise unable to comply with the RFS through their proprietary operations. A retroactive waiver will make those non-obligated parties wary of blending renewable fuels in the future, making it less likely that the RFS targets in subsequent years will be met.

In summary: Any retroactive waiver will harm parties who have acted in good faith to deliver market compliance with the RFS, damage the long-term credibility of the program, deliver little if any benefit to the parties whose economic stress purportedly justifies the waivers, and not undo any aspect of the production, blending, marketing and end use of renewable fuels which has already occurred in 2019 and 2020.

10. Retroactive waivers may negatively affect consumers and retail prices in the future.

Fuel prices in 2019 and 2020 were determined by supply and demand and cannot be changed retroactively via waiver. While granting these waivers will not have any impact on past events, EPA's decision to continue to grant these waivers might have a detrimental impact on 2021 and future RFS compliance and fuel prices. Retroactive waivers effectively change the enforcement of the RFS rules after the fact, creating market uncertainty which might increase both RIN prices and consumer prices going forward.

Under current RFS rules, obligated parties are expected to meet their annual RIN obligation by acquiring RINs to match their production. By March of the following year, all obligated parties must retire those RINs to demonstrate compliance. If EPA issues a requested retroactive waiver, EPA will return the RINs used for compliance. Some of the returned RINs may no longer have any value. In such a situation, an obligated party might be tempted to never purchase RINs in the first place counting on being granted another waiver. Since the market is unaware of whether obligated parties are purchasing RINs or not, there would then exist a great deal of uncertainty around the number of RINs the total market needs for compliance. This uncertainty would create volatility and unnecessarily high RIN prices.

Since consumers ultimately pay the cost of RINs, any increase in RIN prices due to market confusion, failure of the RIN market to function properly, or increases in RIN price volatility will impact retail prices of gasoline and diesel fuel and increase the price the consumer has to pay.

11. Waivers would not provide real-time relief or support to refiners.

The refiners were obligated to acquire the RINs needed for compliance in 2019 and 2020 under EPA's well-established RFS regulations. If EPA were to grant the requested waivers in 2021 or later, the RINs that EPA gives back would have mostly expired due to their two-year life. The RINs used for 2019 RFS compliance would have entirely expired because they were 2018 and 2019 vintage RINs. At the end of 2020, all of these RINs had expired, and are now worthless. The RINs used for 2020 RFS compliance were both 2019 and 2020 vintage RINs. Of these, the 2019 RINs, which could have constituted up to 20% of the obligations, expired at the beginning of 2021.

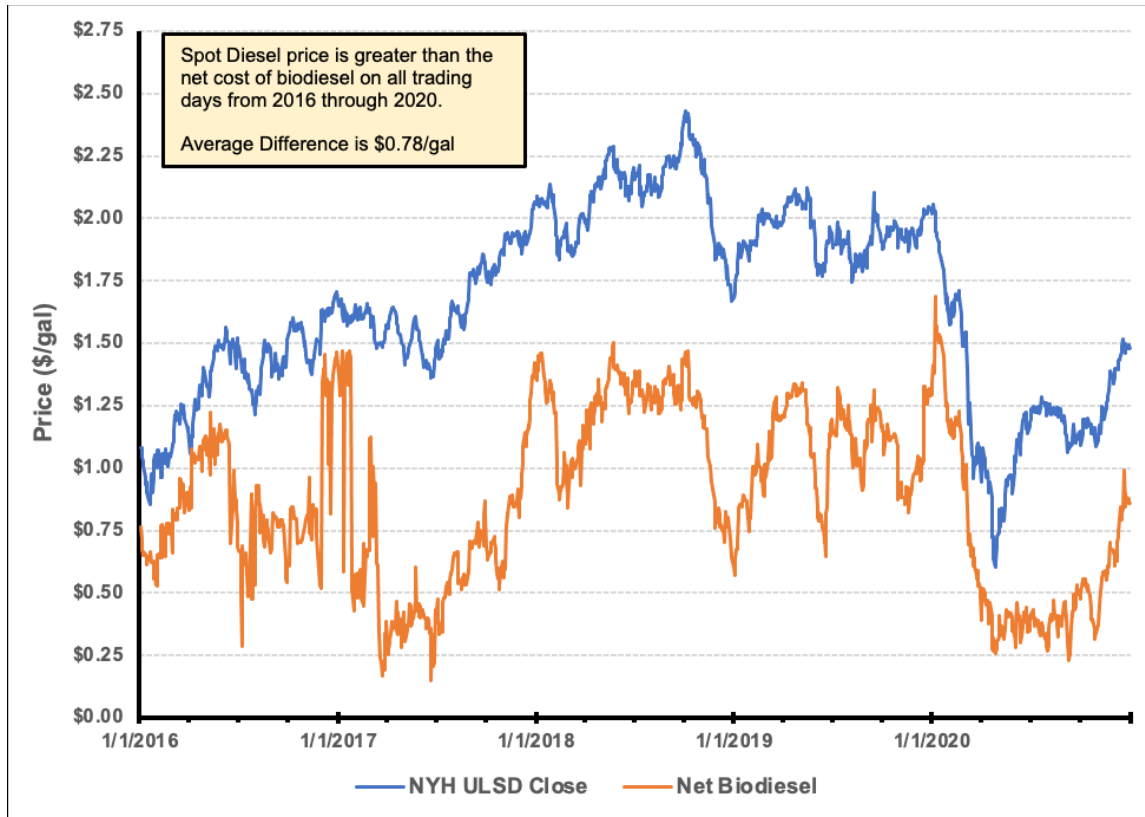
If, as part of its resolution of these petitions, EPA elects to return the RINs used for 2019 and 2020 RFS compliance, it will be returning mostly expired RINs. These will provide little to no relief in 2021 and certainly will not help alleviate any of the claimed small refinery disadvantage in 2019 and 2020.

12. The value of the contained RINs and the biodiesel Blenders Tax Credit (BTC) reduces the net cost of biodiesel to a level where it can be blended profitably. As a result, consumers do not bear any increased cost for diesel fuel attributable to the RFS.

With the consideration of the value of the attached RINs and the \$1.00 Blenders Tax Credit (BTC), most biodiesel blended during 2019 and 2020 was priced at or below the production costs of diesel fuel. As such, the RFS, through the value of the RIN, creates an incentive for the blending of biodiesel into petroleum diesel, just as it does for ethanol blended with gasoline. As the spot market price of biodiesel includes 1.5 attached D4 RINs, the net cost of biodiesel to a diesel-biodiesel blender is actually the spot price minus the 1.5 times the current value of a D4 RIN minus the \$1.00/gal BTC. This cost can be compared to the spot price of diesel for a given market. In general, this comparison will show that the net cost of biodiesel is consistently below that of petroleum diesel. Accordingly, blending biodiesel reduces the cost of production of blended diesel and thus increases refiner profitability; as a result,

consumer prices for diesel fuel were not increased as a result of the RFS. Figure 6 below compares the spot market price for New York Harbor ultralow sulfur diesel (ULSD) to the net cost of New York Harbor spot biodiesel over the five years from 2016 through 2020. During this time frame, the spot price of ULSD exceeded the net cost of biodiesel on every trading day and the average difference was 78 cents per gallon.

Figure 6. Spot Price for New York Harbor ULSD vs. Net Cost of New York Harbor Spot Biodiesel



Sources: OPIS, Stillwater analysis