

April 9, 2019

To: U.S. Environmental Protection Agency  
EPA Docket Center, Office of Air and Radiation Docket  
1200 Pennsylvania Avenue NW  
Washington, DC 20460

Re: Modifications to Fuel Regulations: Provide Flexibility for E15; Modifications to RFS RIN  
Market Regulations (Docket ID: EPA-HQOAR-2018-0775-000, RIN 2060-AU34)

The National Marine Manufacturers Association (NMMA) appreciates the opportunity to provide information on the need for EPA to strengthen its Misfuelling Mitigation Program (MMP) at the same time the agency proposes to allow fuel containing 15 percent ethanol (E15) to be sold year-round.

NMMA is the leading recreational marine industry trade association in North America, representing 1,300 boat, engine, and accessory manufacturers. NMMA members collectively produce more than 80 percent of the recreational marine products sold in the United States. Recreational boating is a significant driver of the country's economy, supporting nearly 700,000 jobs across more than 35,000 marine businesses, while contributing \$170 billion in economic activity.

Each year 142 million recreational boaters take to the water in about 12 million registered boats, consuming about 2.3 billion gallons of gasoline. The proposed rulemaking to allow for the year-round sale of E15 is deeply troubling to the recreational marine industry and based on questionable statutory authority. Marine engines are designed, calibrated, and certified by EPA to operate on blends of gasoline up to 10 percent ethanol by volume. E15 is not approved for use in these non-road engines<sup>1</sup> and EPA has established a Misfuelling Mitigation Program (MMP) to reduce the likelihood of E15 blend fuels from being used in engines for which that fuel is not approved.<sup>2</sup> NMMA strongly believes, and polling indicates, the current MMP is grossly inadequate and not accomplishing the statutory mandate of consumer protection. This rulemaking would increase the supply of a fuel harmful to millions of marine and other consumer products during the height of the summer boating and recreation season, significantly increasing the risk of damage to consumers of marine and other non-road engine products. Additionally, it will continue to diminish consumer choice for ethanol-free fuels which are in high demand by many boaters and small engine product consumers.

While we appreciate EPA's acknowledgement in this proposal that as E15 and other higher-level ethanol blends become more prevalent in the marketplace, the use of additional misfuelling mitigation measures may be appropriate, we disagree with the assessment that such misfuelling measures are unnecessary at this time and out of the scope of the proposed action. NMMA has explained in detailed comments submitted to the agency on previous rulemakings regarding why additional mechanisms are required to fully prevent misfuelling of marine and other non-road engine products.<sup>3</sup> A recent Harris Poll conducted on behalf of the Outdoor Power Equipment Institute (OPEI) shows misfuelling is on the rise, with more

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<sup>1</sup> 75 Fed. Reg. 68,094 (Nov. 4, 2010).

<sup>2</sup> 40 C.F.R. Part 80, Subpart N—Additional Requirements for Gasoline-Ethanol Blends.

<sup>3</sup> [http://nmma.net/assets/cabinets/Cabinet515/Complete%20OPEI\\_NMMA%20Year-Round%20E15%20Comments.pdf](http://nmma.net/assets/cabinets/Cabinet515/Complete%20OPEI_NMMA%20Year-Round%20E15%20Comments.pdf)

than 3 in 5 Americans mistakenly assuming that any gas sold at gas stations is safe for all of their products. According to the research only about 2 in 5 Americans (37%) know higher ethanol blends are harmful to engines such as those in boats, mowers, chainsaws, snow mobiles, generators, and other engine products, and that only 1 in 5 Americans (20% down from 25% in 2017) say they notice the ethanol content at the gas pump, with more saying they notice advertisements for specials inside (24%). These comments address the financial and safety implications for millions of consumers as a result of the proposed rule and the need to include sufficient protections for at-risk consumers under any regulatory changes that would increase the amount of E15 in the marketplace.

### **Use of E15 and Higher Ethanol Blends Fuels in Non-Road Engines Will Damage those Engines and Cause Harm to Manufacturers and Consumers**

Use of E15 in marine and other non-road engine products has both adverse environmental, safety and economic consequences. The additional oxygen content of higher ethanol blend fuels produces a significant increase in engine temperatures that results in increased engine wear and ultimately engine failure. Further, the increased amount of ethanol causes increased corrosion of both metallic, rubber and plastic components. This in turn leads to performance degradation, emission increases, engine failure, and potential fuel leaks as rubber and plastic components no longer form a complete seal.

NMMA members, through the U.S. Department of Energy's Renewable Energy Laboratory, have extensively studied the effects of E15 on marine engines. The results unequivocally show safety problems caused by significant engine damage, poor engine performance and difficulty starting. Higher ethanol blends increase heat and corrosive properties that destroy boat engines, leading to costly repairs, voided warranties, and dangerous maintenance issues. Moreover, the study also showed use of E15 in marine engines results in emission increases outside of EPA certification limits, increased fuel consumption, and damage severe enough to prevent engines from completing the EPA durability testing process.<sup>4</sup> Testing conducted on small non-road engines also identified problems related to E15 use, including leaner engine operation, higher operating temperatures, higher operating speed, and unintentional clutch engagement. Based on these studies and others, EPA has prohibited the use of E15 in marine engines, other non-road equipment – including off-road vehicles, lawnmowers, tractors, utility vehicles, trimmers, chain saws, and other lawn and garden equipment – yet the current proposed rulemaking does nothing to truly address the risk for consumers of marine and other non-road engine products. Increasing the availability of E15 similarly increases the risk that consumers will choose the wrong fuel for use in their marine and other non-road engine products, resulting in more economic and environmental harms from misfuelling of these engines. For marine engines, the potential for engine failure due to use of E15 presents the additional safety risk of leaving boaters stranded on the water.

### **Recent Polling Data Suggests that Widespread Consumer Confusion Continues Regarding the Use of E15 and other Ethanol Blends in Non-Road Engines.**

Even though EPA has prohibited the use of E15 in marine and other non-road engine products, misfuelling continues and consumers remain confused about the fuels that are appropriate for use in their marine and other non-road engine products. A Harris Poll conducted in 2018 on behalf of OPEI

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<sup>4</sup><http://www.nmma.org/assets/cabinets/Cabinet515/Marine%20Biobutanol%20Research%20Book%20SFS2.compressed.pdf>

concluded that more consumers are using the wrong type of fuel in their products. In 2018, 11% of those surveyed reported using E15, E30, E50, or E85 to fuel their equipment, up from 7% in 2015. The study found that Americans are more likely now than in years past to believe higher ethanol blends of gasoline are safe for any gasoline (i.e., non-diesel) engine (38% in 2018 vs. 31% in 2017, 31% in 2016, and 30% in 2015). The Harris Poll also found that only 20% of consumers, down from 25% in 2017, say they notice the ethanol content at a gas pump. When asked about the label required under the current EPA MMP, more than 3 in 5 Americans (63%) feel it is inadequate to inform consumers about E15 fuel being illegal to use in outdoor power equipment. Furthermore, nearly 9 in 10 Americans (87%) agree that the U.S. government should do more to educate the public on correct fueling for various engine types.

Consumer education and safeguards at the point of sale are incredibly important to recreational boaters — approximately 95% of recreational boats are less than 26 feet in length and are capable of being—and often are—transported by trailer to water bodies. The vast majority of these boats are fueled at retail gas stations when being towed behind vehicles, rather than fueled at marinas. The risk of misfuelling with E15 is therefore high, particularly if fuel pumps are not clearly labeled regarding ethanol content or effectively warn boaters that E15 should not be used in marine engines.

Photo examples 1 and 2 in Attachment E15 NMMA Comments show an example of current pump configurations and labeling. The sheer number of labels on fuel pumps makes the ethanol content and warning labels difficult to locate and even more difficult to comprehend, particularly in the few seconds consumers may spend deciding on the grade or type of fuel to purchase. As these photos show, label location also differs from pump to pump, so consumers cannot always expect to look to a standard location on the fuel pump to determine the ethanol content of a fuel before making purchasing decisions. Even if the current E15 warning label alone were sufficient to deter misfuelling, the lack of standardized label placement and frequent placement above or below eye level or behind hoses significantly reduces its effectiveness. Photo example 3 in Attachment E15 NMMA Comments depicts the advertisement of “Unleaded 88” fuel, which contains 15 percent ethanol but is only labeled as 88 octane gasoline. Although pumps dispensing “Unleaded 88” also carry the current E15 warning label, the average consumer will not associate an E15 label with Unleaded 88, greatly increasing the risk of misfuelling. These changes in fuel marketing strategies and continuing consumer confusion about appropriate fuels for their vehicles and engines merit careful review by EPA and the establishment of a more robust MMP.

### **Misfuelling of Marine and Other Non-Road Engines Causes Economic Harm to Consumers**

The polling cited above found that consumers are increasingly using fuels with more than 10 percent ethanol to fuel their marine engines and other non-road engine equipment. The result of misfuelling is engines that perform poorly, or not at all, and which can pose safety risks to consumers. Because misfuelling destroys marine engines and voids the manufacturer’s warranty, the cost of replacing equipment damaged by E15 is entirely borne by the consumer. Many of the types of products prohibited from E15 use can have service lives of at least 10 years or more if properly maintained, but the cost of early replacement due to misfuelling can have significant economic consequences to individual consumers.

Specific to the boating industry, approximately 64% of boat owners have annual household incomes below \$100,000. Replacing an engine that is damaged by E15 use can cost the consumer several hundred to several thousands of dollars. Again, use of E15 voids the manufacturer’s warranty so the entire cost of misfuelling is shouldered by the consumer.

If E15 is permitted to be sold year-round, the rate of misfuelling is likely to increase, along with the economic impact on the public. The economic costs of misfuelling, and the need to protect consumers from the expense of replacing engines and equipment damaged by E15 use, weigh heavily in favor of a more comprehensive MMP and increased customer awareness of the risks of E15 use. A coordinated effort by all stakeholders - including EPA - to educate consumers about the need to carefully select the fuel used in marine engines and other non-road engine products is required.

### **Specific Recommendations for Reducing Misfuelling and Improving Consumer Awareness about E15.**

First, EPA should address needed changes to the E15 label currently in use on fuel pumps dispensing that fuel. Specifically, NMMA recommends that in developing a new label EPA solicit stakeholder input on whether the size, design, or other characteristics of the label should be changed to more clearly communicate the fuel's ethanol content to consumers. NMMA also recommends that EPA request comments on the placement of labels in order to maximize the effectiveness of the label and increase consumer awareness of the fuel's ethanol content. EPA should also consider whether E15 pump labels should carry warnings in languages other than English in order to more broadly communicate the risk of fueling nonroad engines with E15. Additionally, EPA should examine whether specific changes are necessary to the labels used on E85, blender pumps, and pumps dispensing midlevel ethanol blend fuels, as well as labels for pumps dispensing E0 and E10 fuels.

Second, EPA should evaluate the use of physical barriers to reduce the risk of misfuelling of engines for which the use of E15 is not approved. Such physical barriers were implemented when EPA went from leaded to unleaded fuel, and specific reasoning for not implementing in this bifurcated fuel phase should be made available. If physical barriers are not deemed appropriate, NMMA recommends that EPA require fuel pumps dispensing E15 or higher-ethanol blends to be equipped with a keypad approval system that would be tied to payment method or fuel grade selection. A keypad system is NMMA's preferred approach to a physical barrier to prevent misfuelling—balancing the needs of infrastructure feasibility, cost and consumer protection. This system could require the consumer to confirm that she or he understands that the fuel contains more than 10% ethanol and cannot be legally used in non-road products due to the risk of substantial damage and/or voiding warranty coverage. In the 2011 MMP, EPA concluded that information available at that time did not support the adoption of a keypad or touch screen information display or confirmation requirement. However, due to the expanded availability of E15 and the likely increase in sale of E15 due to the recent RVO increases, this option is likely to be more cost-effective and feasible than when E15 volumes were significantly lower. NMMA therefore recommends that EPA evaluate the potential cost of implementing such systems as well as the effectiveness in preventing misfuelling of non-road engines. We recognize that implementing a keypad verification system imposes costs on fuel retailers. However, engine damage and replacement impose significant costs on consumers that can be avoided if robust barriers are put in place to prevent misfuelling in the first place. NMMA also recommends that EPA consider adopting a different fuel pump nozzle size for those pumps dispensing E15. EPA previously rejected a different-sized nozzle as not feasible. However, at the time of the original MMP, EPA anticipated that the transition to E15 would take time and would not immediately be available across the country. Considering the current broad availability of E15 in nearly 1,800 retail stations across 30 states currently offering E15 and the agency's proposed rulemaking to allow E15 to be sold year-round, EPA must reconsider whether physical barriers to use of E15 in engines for which use of that fuel is not approved would now be a more cost-effective solution to preventing misfuelling. NMMA recognizes that requiring different-sized nozzles for E15 comes at a cost to fuel

retailers. However, we strongly recommend that EPA balance the cost of implementing physical barriers to misfuelling with the costs to consumers of replacing marine engines and non-road engine products due to damage from misfuelling. The economic impact on fuel retailers alone should not be the only factor in determining whether physical barriers are a feasible option.

In addition, NMMA recommends that EPA consider whether to require dedicated fuel pumps dispensing only fuels containing 10 percent or less ethanol. We believe that this is the only option that will completely mitigate against misfuelling. Beyond the new products being sold each day, it is also important to note that recreational boats are designed and built to be used for decades. While newer marine engines are designed to operate on E10, approximately 16 million legacy marine engines remain in use that will be harmed by higher-ethanol blends. We therefore recommend that EPA require the continued sale of E10 and E0 fuels, as well as require fuel retailers to maintain a dedicated pump for E0 or E10 gasoline.

Finally, NMMA also recommends that EPA solicit stakeholder input on other misfuelling mitigation strategies that were deemed to have benefits outweighed by cost in the 2011 MMP final rule, as well as any other measures that would reduce the risk of misfuelling and increase customer awareness of the harm E15 poses to non-road engines.

## **Conclusion**

Year-round sales of E15 should not move forward, and at the very least not until and unless more robust consumer education and misfuelling protections are reviewed and in place. NMMA appreciates the opportunity to provide comments and background information on EPA's proposed rule to allow E15 to be sold year-round, and stands ready to work with EPA to develop needed consumer safeguards from misfuelling to ensure boaters and all consumers have a safe and reliable fuel supply. Please contact Nicole Vasilaros at [nvasilaros@nmma.org](mailto:nvasilaros@nmma.org) or 202-737-9763 with any questions.

Respectfully submitted:



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