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Chairman James L. Connaughton
Interagency Ocean Policy Group
White House Council on Environmental Quality
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Public Comment on Final Report

Dear Chairman Connaughton:

The National Marine Manufacturers Association (NMMA) appreciates the opportunity to present the White House Council on Environmental Quality (CEQ) Interagency Ocean Policy Group (IOPG) with the following comments in response to the release of the U.S. Commission on Ocean Policy's Final Report, *An Ocean Blueprint for the 21st Century*, released September 20, 2004.¹

NMMA is the nation's largest recreational marine industry association, representing more than 1,500 boat builders, engine manufactures, and marine accessory manufacturers. NMMA members collectively produce more than 80 percent of all recreational marine products made in the United States. With 13 million registered boats and almost 72 million boaters nationwide, the recreational boating industry contributes \$30 billion annually to our nation's economy. The health of our marine resources is of vital importance to NMMA members and NMMA applauds the both the U.S. Commission on Ocean Policy and CEQ for their intensive commitment and dedication to addressing the issues and challenges facing our oceans.

While NMMA broadly supports the Commission's recommendations, we offer the following comments to help clarify the record on issues of importance to recreational marine manufacturers and to the American boating community at large.

I. General Comments

NMMA is pleased with the Commission's inclusion in the Final Report of the importance of the recreational marine industry and recreational vessel activities to the U.S. economy. Recreational

¹ The Report was mandated by the Oceans Act of 2000 (Pub. L. 106-256).

boat, engine, trailer, and marine accessory manufacturers, as is stated in the Commission's report, contribute \$30 billion to the nation's economy annually.² The recreational boating industry accounts for nearly 400,000 jobs nationwide, providing nearly \$7 billion in wages every year. Recreational boating also drives millions of Americans to the nation's coastal communities for recreation and tourism annually, contributing billions in spending and sustaining hundreds of thousands of related jobs for people who work in hotels, restaurants, marinas, gas stations, grocery stores, and other retail shops in those local economies. With more and more Americans pursuing outdoor recreation every day, the need to ensure that our nation's aquatic treasures remain healthy and beautiful is more important than ever. To that end, NMMA strongly encourages the Administration to include the recreational boating community as an important stakeholder group in any policymaking body, council, or committee where public or industry input is sought. In addition, the importance and needs of recreational boating should be included in all considerations of oceans management.

II. Recreational Marine Engines

In Chapter 16 of the Final Report, the Commission discusses air and oil emissions from recreational vessels and makes several recommendations.³ The recreational marine industry has consistently been ahead of the curve on many environmental issues, including the development of cleaner and quieter engines. Therefore, NMMA supports the Commission's recommendation that the National Ocean Council (NOC) coordinate federal agency efforts for the "development of incentives to encourage early replacement of older two stroke engines" in recreational boats.⁴ NMMA is concerned, however, with the misleading omissions and inclusion of certain data in the Commission's discussion of vessel emissions that remained in the Final Report despite clarifying comments submitted to the Commission by NMMA during the comment period of the Preliminary Report. NMMA respectfully submits to IOPG the following data regarding the newly available marine engines and recreational marine engine pollution to set the record straight and to assist the Administration in its ongoing development of policy.

Newest Generation of Environmentally Advanced Marine Engines Are Well Ahead of Schedule

In the Preliminary Report, the Commission cited an NMMA statistic indicating that "most of the approximately ten million gasoline-fueled recreational motorboats and personal watercraft have older two-stroke engines that will continue to discharge air and water pollutants until they are retired."⁵ During the comment period for the Preliminary Report, NMMA took issue with this citation and the conclusion of this statement. In the Final Report, the Commission removed the citation to NMMA's statistics, but the statement remained. NMMA wishes to make clear to the Administration that recreational marine engine manufacturers have made substantial advances in clean engine technologies well ahead of regulatory deadlines. These advances were made by

² Final Report of the U.S. Commission on Ocean Policy, *An Ocean Blueprint for the 21st Century*, Washington, D.C., September 2004, at 195 ("Final Report").

³ Final Report at 202-209.

⁴ However, it is NMMA's position that any measures developed by policy makers to expedite the retirement of carbureted two-stroke outboard / personal watercraft engines should not prove cost prohibitive and ineffective in reducing hydrocarbon inventories. Therefore, any incentive programs should include flexibility for manufacturers and consumers as well as reliable assurances of effectiveness.

⁵ Final Report at 207.

marine engine manufacturers in order to comply with Environmental Protection Agency (EPA) regulations, particularly a 1996 rulemaking that requires marine engine manufacturers to reduce hydrocarbon and NOx exhaust emission for spark-ignition gasoline marine engines by an average 75 percent between 1998 and 2006 on all new outboards and personal watercraft. In addition, regulations imposed by the California Air Resources Board (CARB) have not only accelerated the implementation of the rule nationwide, but have resulted in a new generation of marine engines that exceed the EPA mandated reductions. In short, onerous new regulations in this area would be unnecessary.

Recreational Vessels Are a Not a “Substantial Source of Petroleum Contamination”

NMMA must take issue with the Commission’s statement in the Final Report that “recreational vessels and personal watercraft with two-stroke outboard motors are estimated to be a *substantial* source of petroleum contamination in U.S. waters”⁶ NMMA finds this statement particularly misleading for two reasons: First, the Commission also recognizes in the Report that “the true magnitude of the problem remains unclear.”⁷ Second, the Commission cites for the “substantial source” proposition a study conducted by the National Research Council (NRC) regarding oil pollution from recreational vessels that itself notes that carbureted two-stroke engines in recreational marine vessels “are responsible for about 2 percent of the petroleum hydrocarbons introduced into North American waters each year.”⁸ NMMA does not mean to diminish the environmental importance of petroleum pollution in our oceans; nonetheless, the two percent from recreational vessels can hardly be considered a “substantial source.” Although the Commission elected to retain this characterization in its Final Report, NMMA urges the Administration and the broad spectrum of federal agencies involved in U.S. oceans policy to consider the following comments regarding the NRC study, as well as additional data disputing the suggestion that recreational vessels are a “substantial” source of petroleum contamination.

NRC Report Cited by Preliminary Report Makes Questionable Assumptions

As noted above, the Commission relies upon the NRC report, *Oil in the Sea III: Inputs, Fates, and Effects* for the proposition that recreational vessels are a “substantial source of petroleum contamination in U.S. waters.” However, the NRC Report makes several questionable assumptions in order to arrive at its conclusion that recreational marine vessels are a “significant source” of anthropogenic petroleum pollution in U.S. and world waters.⁹ For example:

- The NRC report excludes from its calculations all four-stroke engines because it claims the population of four-stroke outboard engines is “not known.”¹⁰ Although specific population data has not been developed for four-stroke engines, it is clear that these engines are being phased-in at a rapid pace pursuant to the EPA’s Final Rule for New Gasoline Spark-Ignition Marine Engines.¹¹ Moreover, retirement data on carbureted two-stroke engines can be extrapolated from scrappage calculations combined with the

⁶ Final Report at 207 (emphasis added).

⁷ *Id.*

⁸ National Research Council, *Oil in the Sea III: Inputs, Fates, and Effects* (2003) at 65.

⁹ National Research Council, *Oil in the Sea III: Inputs, Fates, and Effects* (2003) at 4.

¹⁰ National Research Council, *Oil in the Sea III: Inputs, Fates, and Effects* (2003) at 219.

¹¹ 40 C.F.R. Parts 89, 90 & 91.

expected life of carbureted two-stroke outboard and personal watercraft engines, with EPA models to determine hydrocarbon emissions reductions over time (due to the introduction of four-stroke and direct injected two-stroke engines),¹² and annual retail sales of these new technology engines. Therefore, from these sources population data for new engine technologies (direct injected two-stroke and four stroke engines) can be estimated.

- The NRC report assumes “that all the two-stroke populations are standard models requiring fuel and gas mixtures,” therefore excluding new, cleaner direct injected engine types.¹³
- The NRC report does not distinguish between “seasonal differences between regions where boating use may vary considerably” in its calculation of the average hours for nationwide use of two-stroke outboard engines and personal watercraft.¹⁴
- The NRC report admits that “[t]he factors used to develop maximum and minimum estimates are somewhat subjective and reflect the committee’s confidence in the data available and the methods and assumptions used to complete the calculation.”¹⁵ NMMA does not share the NRC’s confidence in that data.

The NRC report excludes data on the newer, cleaner engine technologies developed and produced by recreational marine manufacturers, but still acknowledges that the “population of engines used in recreational vessels is changing dramatically.”¹⁶ The recreational marine engine population is changing dramatically and should be properly taken into account by policy makers. For example, because of EPA’s 1996 Final Rule, the agency expects to achieve the following projected hydrocarbon and NOx reductions nationally: 4 percent in 2000; 26 percent in 2005; 52 percent in 2010; 68 percent in 2015; 73 percent in 2020; and 75 percent in 2050, with the model showing a constant 75 percent reduction in HC and NOx emissions through 2050. NMMA and marine manufacturers have aggressively sought to comply with the EPA rulemaking and the industry is exceeding these standards. That the HC and NOx reductions are occurring at such a rapid and sustained rate calls into question many of the NRC’s findings, particularly since those findings rely exclusively on purported aqueous emissions from traditional two-stroke engines.

Even if it is true, as the NRC has concluded, that the number of two-stroke engines in use in U.S. waters is “extremely large,” that number will inevitably decline due to the lifespan of standard two-stroke engines and the public’s demand for cleaner, quieter technology. The recreational marine industry is meeting that demand vigorously. Many experts in the recreational marine community have speculated that within a decade, carbureted two-stroke marine engines will be largely a thing of the past. Ultimately, when the remaining engines that are currently on the market reach the end of their utility, they will be retired and replaced by newer technology. Since, the retirement rates of these engines do not appear to be accounted for in the NRC study the conclusions of that study are in question.

¹² United States Environmental Protection Agency, *Regulatory Impact Analysis: Control of Air Pollution Emission Standards for New Nonroad Spark-Ignition Marine Engines* (1996).

¹³ NRC at 220.

¹⁴ *Id.*

¹⁵ *Id.* at 82.

¹⁶ *Id.*

Alternate Data Was Not Considered by NRC

The NRC report also fails to consider a substantial body of literature on the subject of recreational marine engine emissions, much of which is produced by the EPA and independent experts. The NRC report therefore represents an incomplete picture which should be carefully scrutinized by the Administration. NMMA feels strongly that the NRC study should not be the sole source for concluding that recreational vessels are a “substantial source of petroleum contamination.” Because the Commission did not include any alternate studies in its Final Report, NMMA wishes to make available to the Administration the following studies that demonstrate that recreational vessels are *not* a “significant source” of marine pollution in U.S. waters. For example:

- Keuka Lake Water Quality Testing Program (2000) – Results of this test demonstrated via representative environmental testing that no detectable levels of hydrocarbons were found during the most crowded boating areas during holiday weekends.
- Water Test: Donner Lake California (1999) - This study, which was conducted on July 6, traditionally the busiest boating weekend of the year, showed no trace fuel components in the lake.
- Water Test: Anaheim California (1997) – In August 1997, a three-day personal watercraft race was held on an artificial lake in Anaheim, CA. The lake was filled with 14 million gallons of drinking water. In order to use the water, a \$250,000 bond was placed to guarantee that the water would be returned unspoiled, and after intense testing which showed no trace of fuel, all the water was returned and the bond money was refunded.¹⁷

NMMA also wishes to bring to the attention of IOPG a 1994 memorandum written by the Environmental Protection Agency entitled, “The Effects of Marine Engine Exhaust Emissions on Water Quality: Summary of Findings of Various Research Studies,” which comes to the opposite conclusion of the NRC report. The EPA memo evaluated eleven studies that examined the impact of recreational marine engine emissions on marine environments throughout the country, three of which were summaries of a variety of other such studies. After determining that it had captured “the consensus of the literature,” EPA concluded:

Based on the studies reviewed for this report, the overall water quality effects of marine engine exhaust gases do not appear to be significant in general.¹⁸

In addition, the most widely-cited studies which show significant levels of pollution employed non-representative methodologies, such as running engines in test tanks for extended periods of time. These studies fail to accurately reflect actual marine environments and significantly overestimate the discharge of aqueous hydrocarbon emissions by two-stroke marine engines.

Clarifying Comments Regarding Carbureted Two-Stroke Engines

¹⁷ These and other studies can be viewed at <http://www.pwia.org/issues/emissions.html>.

¹⁸ Memorandum from Jean Marie Revelt, Engine and Vehicle Registration Branch, United States Environmental Protection Agency, to Public Docket No. A-92-38 (Nov. 15, 1994).

NMMA would also like to provide some clarifying comments regarding the characterization that carbureted two-stroke outboard and personal watercraft engines release significant amounts of oil into U.S. waters. Such a characterization is misleading. Exhaust of a carbureted two-stroke outboard or personal watercraft is at a temperature of several hundred degrees and is expelled in a narrow trail of exhaust behind the boat as it travels through the water. As this “tail” of exhaust leaves the hub of the propeller, it quickly rises to the surface where it is released into the atmosphere. At idle and off-idle conditions, outboard motors are designed to emit exhaust above the water through an exhaust relief system. Under these conditions, very little if any exhaust is discharged into the water. As has been mentioned, several EPA studies consistently demonstrate that only a fraction of the gasoline used by the engine is deposited into the water and that this small amount of gasoline immediately begins to volatilize from the water into the air. The scientific data indicates quite clearly that although 20-25 percent of the fuel consumed by an outboard bypasses the combustion process and exits in the exhaust, only a fraction goes into the water. Lubricant releases at these levels do not overwhelm nature’s ability to biodegrade the contaminant. These findings are in stark contrast to the NRC conclusion cited in the Commission’s Final Report that “two-stroke outboard motors release anywhere between 0.6 and 2.5 million gallons of oil and gasoline into U.S. coastal waters every year.”¹⁹

The U.S. Commission on Ocean Policy did not include these clarifications in its Final Report and chose instead to rely exclusively on the NRC study to justify its characterization of recreational vessel pollution. Nevertheless, recreational marine engine manufacturers worked closely with EPA to establish effective air quality standards and have rapidly developed new technology that will reduce hydrocarbon emissions by non-road spark-ignition marine engines by more than 80 percent. The industry looks forward to working with the Administration, Congress, and regulatory agencies.

IV. Conclusion

NMMA applauds the Administration for its ongoing work to address the many serious challenges facing the world’s oceans. The recreational marine industry and the American boating public have a long history of sound environmental stewardship. The simple truth is that healthy, beautiful, and vibrant marine environments are essential to recreational boating. The National Marine Manufacturers Association and its more than 1,500 members look forward to a continuing dialogue with the Administration on these issues of vital national concern.

Please do not hesitate to contact me at 202-737-9750; mfontaine@nmma.org or NMMA’s Regulatory Counsel, Cindy Squires at 202-737-9766; csquires@nmma.org if you have any questions or would like additional information or assistance.

Respectfully submitted,



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¹⁹ Final Report at 207.