COLUMBIA LAW SCHOOL
SABIN CENTER FOR CLIMATE CHANGE LAW

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Via electronic filing

E.O. 13795 Review
National Oceanic and Atmospheric Administration (NOAA)
Silver Spring Metro Campus Building 4 (SSMC4), Eleventh Floor
1305 East-West Highway
Silver Spring, MD 20910

Re: Review of National Marine Sanctuaries and Marine National Monuments Designated or Expanded Since April 28, 2007, Docket ID NOAA-NOS-2017-0066

Dear NOAA Administrator:

The Sabin Center for Climate Change Law at Columbia Law School submits these comments on in response to NOAA's request for input on its review of twelve National Marine Sanctuaries and Marine National Monuments pursuant to Executive Order 13795: Implementing an America-First Offshore Energy Strategy. We understand that the purpose of this review is to inform the administration's decision of whether to remove protections for these marine areas so that they can be opened for fossil fuel and minerals development. To this end, the administration has asked NOAA to report on "the opportunity costs associated with potential energy and mineral exploration" in these areas, as well as other factors relevant to its decision.

We are submitting these comments to highlight several key considerations that are relevant to this review:

(i) **NOAA's review should take note of legal hurdles:** The administration would confront significant legal hurdles and uncertainties if it attempted to remove protections under the Antiquities Act or the National Marine Sanctuaries Act (NMSA), and courts may very well conclude that the administration lacks authority under one or both of these statutes to modify previous designations for the purpose of implementing the policy set forth in Executive Order 13795. The legal and administrative costs associated with changing these designations (or attempting to change these designations) would be very high. Furthermore, to comply with the requirements of the National Environmental Policy Act (NEPA), NOAA should assess the environmental impacts of changes to the designation of sanctuaries. This would be in advance of and separate from the multiple environmental reviews required to comply with the requirements of the Outer Continental Shelf Leasing Act and the National Environmental Policy Act.

(ii) **There are significant climate-related opportunity costs associated with exploration or development of energy resources in marine protected areas:** NOAA has recognized that marine protected areas provide a number of critical benefits pertaining to climate change adaptation and mitigation. These benefits would

be lost if protections were lifted and these areas opened up to exploration and development of mineral and fossil fuel deposits.[1]

(iii) Future prices will inform the opportunity costs associated with exploration or development of energy resources in marine protected areas: A thorough accounting of the costs and benefits of developing oil and gas deposits in marine protected areas must consider prospective prices for whatever resources might be extracted as well as the myriad costs to be incurred in advance of their extraction.

I. Legal hurdles associated with changing the designation of Marine National Monuments and National Marine Sanctuaries

For the reasons that follow, the administration would face significant legal hurdles if it attempted to lift protections and allow oil and gas development in marine national monuments and national marine sanctuaries.

A. Marine National Monuments

The Antiquities Act of 1906 authorizes the President to designate as national monuments objects of historical or scientific interest on federal lands.[2] The President's authority to designate pursuant to the Act is expansive, though not unlimited.[3] The process for designation, and for the expansion of a designated monument, is cursory: the President issues a proclamation.[4] However, no provision of the Antiquities Act authorizes the President to abolish or substantially diminish such designations, and multiple legal analyses have concluded that only an Act of Congress can undo a monument designation.[5]

While the management goals for different types of federal lands vary, the basic management goal for all designated national monuments is uniformly protection and preservation—regardless of whether that goal is articulated in the presidential proclamation or in the management plan of the agency charged with carrying out the proclamation.[6] This goal informs the restrictions that accompany monument designations, such as prohibitions or limitations on entry, leasing, or

[1] There are many other benefits associated with these areas as well – ecosystem services, recreational benefits, aesthetic benefits, etc. – but these are beyond the scope of our letter.

[2] 54 U.S.C. § 320301.

[3] Cameron v. United States, 252 U.S. 450, 455–56 (1920) (rejecting challenge to President T. Roosevelt's designation of over 800,000 acres as the Grand Canyon National Monument); *but see also* 54 U.S.C. §§ 320301(b) ("The limits of the parcels shall be confined to the smallest area compatible with the proper care and management of the objects to be protected."), 320301(d) ("No extension or establishment of national monuments in Wyoming may be undertaken except by express authorization of Congress."); Carol Hardy Vincent, Congressional Research Service, National Monuments and the Antiquities Act 8 (Sept. 7, 2016) ("monument proclamations typically have had explicit protections for valid existing rights for land uses.").

[4] 54 U.S.C. § 320301(a).

[5] Mark S. Squillace et al., *Presidents Lack the Authority to Abolish or Diminish National Monuments*, 103 Va. L. Rev. 55 (2017); Alexandra M. Wyatt, Congressional Research Service, Antiquities Act: Scope of Authority for Modification of National Monuments 3–4 (Nov. 2016); 39 Op. Att'y Gen. 185, 187 (1938) (advising President Roosevelt that he lacked the authority to abolish the Castle-Pinckney National Monument in South Carolina).

[6] Wyatt, *supra* note 5, at 2–3.

development.[7] It has also informed decisions to alter the size or shape of an area designated as a national monument.[8]

For these reasons, any attempt by the Secretary – or President – to abolish a national marine monument would be legally unprecedented. Furthermore, even an attempt to diminish the size of a monument or the protections incidental to its initial proclamation would be legally contentious and vigorously contested.

B. National Marine Sanctuaries

The National Marine Sanctuaries Act (NMSA) authorizes the Secretary of Commerce to designate marine areas that are of special national significance as national marine sanctuaries. Like the Antiquities Act, the NMSA does not contain any provision expressly authorizing the Secretary of Commerce to abolish a marine sanctuary. However, the NMSA does contain a provision for modifying sanctuary designations. Specifically, 16 U.S.C. § 1434(a)(4) provides:

> The terms of designation of a sanctuary shall include the geographic area proposed to be included within the sanctuary, the characteristics of the area that give it conservation, recreational, ecological, historical, research, educational, or esthetic value, and the types of activities that will be subject to regulation by the Secretary to protect those characteristics. The terms of designation may be modified only by the same procedures by which the original designation is made.[9]

16 U.S.C. § 1434(a) specifies the procedures for designating national marine sanctuaries and modifying those designations. The Secretary of Commerce must engage in notice and comment rulemaking, conduct one or more public hearings, and prepare a variety of sanctuary designation documents, such as an environmental impact statement and a resource assessment. The Secretary must also justify the designation or modification on the basis of standards laid out in the statute, and must weigh a variety of specific factors when doing so. For example, the Secretary may only designate an area as a sanctuary if it determines that it is of "special national interest" due to factors such as, inter alia, its "conservation" and "ecological" value or "the communities of living marine resources it harbors."[10]

Thus, if the Secretary wishes to reduce the size of a marine sanctuary, he would need to explain why he no longer believes that NMFA protections are warranted in light of the standards set forth in the statute. He would also need to explain why the Department now rejects any determinations that were issued when it first designated the sanctuary, for instance, that the area is of special national significance due the ecological values and living resources contained

[7] Vincent, *supra* note 3, at 8.

[8] *See, e.g.*, Proclamation No. 3539, 28 Fed. Reg. 5407 (May 27, 1963) (redrawing boundary of Bandelier National Monument to better align the boundary to the purposes of the monument's designation, namely preserving geologic, scenic, and archaeological resources).

[9] 16 U.S.C. § 1434(a)(4) (emphasis added).

[10] *Id.* § 1433(a)(2).

therein. Merely pointing to an external policy such as Executive Order 13795 would not suffice to justify such reversals.

The Secretary has never exercised § 1434 authority to reduce the size of or abolish a marine sanctuary. There have been several occurrences where the Secretary has *expanded* a sanctuary.[11] There has also been one occasion when expansion was accompanied by the removal of a small area from the boundaries of the sanctuary: the expansion, which increased the sanctuary from 448 to 4,300 square miles, dwarfed the size of the removed area, a port that pre-dated the sanctuary.[12] As such, there is no precedent for utilizing § 1434 to reduce or abolish a marine sanctuary, and the Secretary would be in uncharted legal waters should he attempt to do so. As noted above, there are also a number of procedural requirements that must be adhered to in order to modify a sanctuary designation. Overall, the legal and administrative costs associated with such an action would be substantial.

C. National Environmental Policy Act requirements

In addition to the legal and procedural hurdles noted above, compliance with NEPA imposes others as well. To begin, NOAA should conduct an assessment of impacts traceable to the de-designation of sanctuaries, including a downstream analysis of all emissions associated with sanctuaries to be opened up to oil and gas development, for which there are known or estimated reserves. Furthermore, before the production of any oil or gas from any site located within the areas at issue, BOEM would have to complete multiple environmental reviews, including, at a minimum, one in advance of a new OSC leasing program, another before the sale of any particular lease, another before drilling an exploratory well, and yet another after drilling exploratory wells but before actual production of oil or gas.[13] Completion of environmental assessments and environmental impact statements for rich and sensitive ecosystems in a way that is not susceptible to successful legal challenge requires, at a minimum, careful consideration of all the attributes that merited the protected designation of the areas at issue. This task, even if no one challenges the validity of the EISs that result, would add to the costs associated with conversion of any portion of the protected sites at issue to an oil or gas well. And, given the ecological, scientific, historical, and cultural importance of the areas at issue litigation over each EIS should be expected.

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[11] NOAA, Boundary Changes in the Flower Garden Banks National Marine Sanctuary; Addition of Stetson Bank and Technical Corrections, 65 Fed. Reg. 81176 (Dec. 22, 2000); NOAA, Expansion of Fagatele Bay National Marine Sanctuary, Regulatory Changes, and Sanctuary Name Change, 77 Fed. Reg. 43942 (July 26, 2012); NOAA, Expansion of Gulf of the Farallones and Cordell Bank National Marine Sanctuaries, and Regulatory Changes; Name Change, 80 Fed. Reg. 34047 (June 15, 2015).

[12] NOAA, Boundary Expansion of Thunder Bay National Marine Sanctuary, 79 Fed. Reg. 52960 (Sept. 5, 2014).

[13] *See* Adam Vann, Congressional Research Service, Offshore Oil and Gas Development: Legal Framework 5, 7, 10, 12–13 (Sept. 2014), https://perma.cc/Z6FN-Q2UC (describing 4-step process established by the Outer Continental Shelf Leasing Act of 1978 and noting interwoven NEPA requirements); *see also* API, Offshore Leasing, Exploration and Development Process, https://perma.cc/EKK3-NE9B (accessed July 20, 2017) (noting actions for which each of three EISs and an environmental assessment are required).

II. Climate-related opportunity costs associated with exploration or development of energy resources in marine protected areas

An opportunity cost or "lost chance" is a gain foregone by taking some action instead of an alternative; generally, though not necessarily, an opportunity cost is incurred where the action taken precludes alternatives. Thus, when considering the costs and benefits of various alternatives to an action, an "opportunity cost" would appear on the list of benefits of a foregone alternative. Evaluating "[t]he opportunity costs associated with potential energy and mineral exploration and production from the Outer Continental Shelf" therefore entails considering benefits that would be foregone or lost at national marine sanctuaries as a result of such exploration and production—something NOAA has already effectively done and described to the public as follows:

> National marine sanctuaries reduce other ocean stressors. National marine sanctuaries have a stable, permanent legal and management infrastructure to protect resources. They provide opportunities for the implementation of management measures to mitigate climate change impacts, or at a minimum, reduce other stressors. Protective actions within national marine sanctuaries also have beneficial effects outside their boundaries, such as the protection of bordering or buffering habitats and the production of larvae, juveniles, and adults of marine species that "spill over" into outside areas. National marine sanctuaries and other protected areas can also serve as important carbon sinks. Over one-half (55%) of the biological carbon stored globally is contained by living marine organisms. National marine sanctuaries that protect habitats such as salt marshes, mangroves, and algal and seagrass beds, all of which store carbon, help mitigate climate change impacts. . . .
>
> National marine sanctuaries serve as sentinel sites to monitor changes. National marine sanctuaries, with their place-based focus, long term data sets, and controlled activities, are able to serve as "sentinel sites" (intensely monitored coastal and marine environments) for monitoring of climate change and other impacts. Real-time results from research and monitoring programs; advice and feedback from stakeholders; and long-term synthesized information from condition reports all feed into decision-making for a sanctuary. The sanctuary superintendents can react in real time to this information and address existing or emerging threats and impacts. Examples of such adaptive management mechanisms include revisions to regulations and management plans, emergency regulations, permitting activities, consultation requirements, and habitat restoration strategies that improve ecosystem resilience. . . .
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> National marine sanctuaries inform the public and local communities about climate change and provide examples of conservation actions. As place-based stewardship featuring onsite managers and staff, local offices and visitor facilities, educational programs, and advisory councils, national marine sanctuaries are an established and

> trusted presence in local communities. Information coming from a sanctuary, including information about climate impacts, may be trusted more than from other sources, and may help make climate change "real" for local residents. National marine sanctuaries are working to reduce the environmental footprint of their offices and facilities, and ensure that their day-to-day operations are conducted in the most environmentally sound manner as possible. This neighborhood approach can help motivate individual citizens, local communities, and coastal decision-makers to take action through volunteer efforts, advisory and friends groups, and other mechanisms. . . ."[14]

The same benefits accrue from marine national monuments. NOAA has reaffirmed these benefits in a number of other documents and online publications.[15] Independent studies have likewise found that marine protected areas can promote adaptation to climate change.[16] For example, one recent study published in the Proceedings of the National Academy of Sciences found that "marine reserves are a viable low-tech, cost-effective adaptation strategy that would yield multiple co-benefits from local to global scales, improving the outlook for the environment and people into the future."[17]

NOAA has also invested resources in the development of a Climate Smart Sanctuaries Program for national marine sanctuaries, which is intended both to improve the resilience and mitigation benefits of these sanctuaries and to facilitate development of and access to valuable information about how climate change is affecting marine ecosystems.[18] The Farallones National Marine Sanctuary is the leading example of this Program's efforts—and is one of the sanctuaries on NOAA's list to review per Executive Order 13,795. NOAA has worked with experts and partners local to the Sanctuary to develop a Climate Change Impacts Report, an Ocean Climate Indicators Monitoring Inventory and Plan, a Green Operations Plan (for mitigation), and a Climate-Smart Adaptation Plan.[19] NOAA notes that this "combined effort, a first of its kind within the National Marine Sanctuary System, will guide sanctuary management and partners to ensure long-term viability of the marine ecosystems within this productive and unique region."[20] If NOAA were to lift protections for the Farallones National Marine Sanctuary and others, it would abandon the progress it has made with the Climate Smart Sanctuaries program as well as the adaptation and

[14] NOAA, National Marine Sanctuaries: Introduction, https://perma.cc/A4UR-QHF6 (updated Feb. 6, 2014).

[15] NOAA, Marine Protected Areas in a Changing Climate, https://perma.cc/2UCR-3MDA (updated Apr. 19, 2017); Greater Farallones National Marine Sanctuary—2016 Ocean Climate Summit Report: Resilience through Climate-Smart Conservation (May 2016), https://perma.cc/BWM7-GEZG; NOAA, Sea Level Rise in East Coast Marine Protected Areas (Mar. 2013), https://perma.cc/374S-CB6J.

[16] Callum M. Roberts et al., *Marine reserves can mitigate and promote adaptation to climate change*, 114 Proc. Nat'l Acad. Sci. 6167 (June 2017); Marine Protected Areas and climate change: Adaptation and mitigation synergies, opportunities and challenges (F. Simard et al. eds. 2017), https://perma.cc/4JQW-3BGW.

[17] Roberts et al., *supra* note 17, at 6167.

[18] Office of National Marine Sanctuaries, NOAA, NOAA's Climate-Smart Sanctuaries: Helping the National Marine Sanctuary System Address Climate Change (2010), https://perma.cc/4A7J-DTV7.

[19] NOAA, Greater Farallones National Marine Sanctuary: Climate-Smart Conservation, https://perma.cc/Z3Z5-8ULR (updated Dec. 21, 2016).

[20] *Id.*

mitigation benefits of these areas. This, too, should be considered in the opportunity cost analysis.

In addition to these adaptation benefits (which, if foregone, would become opportunity costs), developing energy resources in marine protected areas would also sacrifice large mitigation benefits. Take the example of the Bodega and Año Nuevo Basins, where three of the 11 protected areas under review are located; those are the Cordell Bank National Marine Sanctuary, Greater Farallones National Marine Sanctuary, and Monterey Bay National Marine Sanctuary. Burning the oil and gas from technically recoverable deposits thought to lie in those basins would mean generating 858,682,051 metric tons of carbon dioxide equivalent emissions.[21] That figure corresponds to roughly a year of emissions from 250 coal-fired power plants[22]—just six fewer than the tally of 256 coal-fired power plants reported by the U.S. Energy Information Administration as being operated by U.S. electric utilities in 2015.[23]

This rough estimate of the emissions that would result from exploiting rather than preserving just a few of the protected areas for which there are data on oil and gas deposits is not precise, but its order of magnitude is the point: whatever the precise volume of emissions generate, they would be enormous and costly to the climate.

III. Proper opportunity cost accounting should consider climate-related risks to the prices that would be paid for extracted energy resources

As it examines the benefits foregone by not exploiting energy resources located in particular marine protected areas, NOAA cannot ignore the costs that would necessarily be incurred to access those benefits, nor the prices that would likely be paid for extracted oil or gas. This point is made concrete for several of the areas under consideration by the Bureau for Ocean Energy Management's graphic distinctions between "technically recoverable" and "economically recoverable resources"—volumes of the latter are sensitive to market prices.[24] Even assuming the fastest possible progression from their current status to oil or gas production, none of the protected areas would start yielding revenue before 2027;[25] (a more realistic date would be closer

[21] This estimate reflects BOEM estimates of technically recoverable deposits of oil and gas, converted to GHG emissions using a methodology suggested by EPA. *See* BOEM, 2011 National Assessment of Oil and Gas Resources: Assessment of the Pacific Outer Continental Shelf Region, No. 2014-667, at 73, 80, 90 (2014), https://perma.cc/XJ9W-RD78; EPA, Energy and the Environment: Greenhouse Gas Equivalencies Calculator, https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator (last updated Jan. 24, 2017).

[22] EPA, Energy and the Environment: Greenhouse Gas Equivalencies Calculator, *supra* note 21.

[23] Energy Information Administration, Electric Power Annual, tbl. 4.1 (Dec. 2016), https://www.eia.gov/electricity/annual/html/epa_04_01.html (Count of Electric Power Industry Power Plants, by Sector, by Predominant Energy Sources within Plant, 2005 through 2015). EIA reported a total of 427 coal-fired power plants operating across all sectors, not just by electric utilities. *Id.*

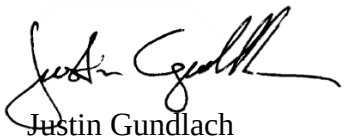
[24] BOEM, 2011 National Assessment, *supra* note 21, at 82, 92, 104, 118.

[25] This date recognizes that any leases offered in a currently protected marine area would need to first be included in BOEM's next 5-year OCS leasing program, which BOEM has reported generally take 30-36 months to prepare. BOEM, *Past 5-Year Program Information - 2007-2012*, https://perma.cc/DTL9-2P4U ("Preparation of a new 5-year program usually takes 2½ to 3 years."); *see also* API, Offshore Leasing, Exploration and Development Process, https://perma.cc/EKK3-NE9B (accessed July 20, 2017) (depicting 7-year process that assumes no litigation over site availability for leasing or conduct of the environmental review process).

to 2030).[26] Any reasonable examination of oil and gas prices must, therefore, consider what the Task Force on Climate-Related Financial Disclosures calls "transition risks," including the risk that policy changes will leave various assets stranded by reducing or destroying market demand for them.[27] As national and international efforts to supplant fossil fuels with other energy sources grow in number and effectiveness, the downward pressure that technology and policy changes will place on oil and gas prices cannot be ignored.[28]

In sum, NOAA's opportunity cost accounting should consider, among other things, factors on both sides of the pincer that can be expected to squeeze the value of exploiting oil or gas deposits in the protected areas under consideration. One side of the pincer would feature the relatively high costs of off-shore drilling and the costs of litigation arising from any decision to rescind protections. The other side of the pincer would feature oil and gas prices pushed lower by the worldwide decarbonization efforts that are currently gathering steam and will be increasingly evident before 2030, which is when production and sale would likely commence.

Sincerely,



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[26] BOEM, 2017—2022 Outer Continental Shelf Oil and Gas Leasing: Proposed Final Program 6-2 (Nov. 2016), https://perma.cc/869S-HNVK ("…OCS projects can take 10 years or more from lease award to initial production…").

[27] Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures 5–6 (June 2017), http://bit.ly/2t4mpAm.

[28] Consider the illustrative example of Canada's tar sands: a relatively costly and environmentally destructive source of oil was initially developed on the assumption that prices would remain robust; as prices have fallen, the falling value of that investment has undermined it and related investments as well. *See* Amory B. Lovins, *Keystone XL Pipeline Is A Gusher Of Financial Risk*, Forbes, Mar. 26, 2017, https://perma.cc/4S5Y-SCHS.