Office of the Governor
State of North Carolina

Roy Cooper
Governor

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March 9, 2018

Ms. Kelly Hammerle, Chief
National Oil & Gas Leasing Program Development
& Coordination Branch, Leasing Division
Office of Strategic Resources
Bureau of Ocean Energy Management (VAM-LD)
45600 Woodland Road
Sterling, VA 20166-9216

RE: Comments for the 2019–2024 Draft Proposed National OCS Oil & Gas Leasing Program

Dear Ms. Hammerle:

On January 8, 2018, the U.S. Bureau of Ocean Energy Management (BOEM) published its Draft Proposed Plan for the National Outer Continental Shelf (OCS) Oil and Gas Leasing Program for the years 2019–2024. I write to convey North Carolina's opposition to oil and gas leasing off North Carolina's coast and ask that BOEM exclude the Mid-Atlantic region from the final 2019–2024 National OCS Oil and Gas Leasing Program.

This cover letter and the attached document constitute my formal comments and explain in detail the State of North Carolina's opposition. In short, offshore drilling threatens our state's coastal economy and environment yet offers little economic benefit to North Carolina.

Coastal tourism generates $3.4 billion annually in North Carolina and supports 35,000 jobs in the eastern part of the state. Commercial and recreational fishing contributes more than $1.96 billion to the state economy. North Carolina has a uniquely dynamic yet fragile coast, with approximately 300 miles of coastline, 2.5 million acres of estuarine waters, and 10,000 miles of estuarine shoreline.

The state also has more than 100,000 acres of state-managed lands and sensitive natural areas and supports 30 endangered or threatened species that are particularly vulnerable to an oil spill. The North Carolina coastal zone is home to state and national landmarks, such as the Pea Island National Wildlife Refuge, Fort Fisher State Recreation Area, Jockey's Ridge State Park, and the nation's first designated national seashore at Cape Hatteras.

We cannot afford to endanger our ecologically sensitive coastlines or the natural and cultural resources that are the foundation of our state's tourism industry and coastal economy.

The Outer Continental Shelf Lands Act requires the Secretary of the U.S. Department of the Interior to consider relevant laws, goals and policies identified by governors of states affected by the 2019-2024 National OCS Oil and Gas Leasing Program. I ask that you consider the laws, goals, and policies detailed in the attached document.

Such laws include but are not limited to the Coastal Area Management Act of 1974; Oil Pollution and Hazardous Substances Control Act of 1978; North Carolina Environmental Policy Act of 1971; Mining Act of 1971; Archaeological Resources Protection Act; Unmarked Human Burial and Human Skeletal Remains Protection Act; N.C. Gen. Stat. Chapter 121, Article 3, on Salvage of Abandoned Shipwrecks and underwater archaeological sites and the North Carolina Archives and History Act.

North Carolina residents and elected officials have expressed bipartisan opposition to oil and gas leasing and drilling off our coast. As many as 30 coastal communities already have passed resolutions opposing drilling, joining hundreds of businesses and a group of North Carolina's Congressional delegation that includes Republicans and Democrats. Because offshore drilling threatens North Carolina's critical coastal industries and unique coastal environment with little benefit for our state residents, it is a bad deal for North Carolina.

I ask that you respect the wishes of our state and exclude the federal waters off North Carolina's coast from the 2019–2024 National OCS Oil and Gas Leasing Program.

With kind regards, I am

Very truly yours,

Roy Cooper

Roy Cooper

Detailed Comments from North Carolina Governor Roy Cooper on Draft Proposed Plan for the 2019–2024 National Outer Continental Shelf Oil and Gas Leasing Program and Programmatic Environmental Impact Statement

The State of North Carolina requests that the waters off North Carolina's coast, including but not limited to the Mid-Atlantic region, be excluded from the 2019–2024 National Outer Continental Shelf Oil and Gas Leasing Program (2019–2024 Program). The risk of economic and environmental damage to North Carolina far outweighs any potential benefits from the development of offshore oil and gas resources. The following comments explain in detail North Carolina's opposition.

As the attached cover letter explains, these comments are in response to the Bureau of Ocean Energy Management's (BOEM) January 8, 2018[1] request for comment on both the Draft Proposed Program (DPP) for the 2019–2024 National OCS Oil and Gas Leasing Program and BOEM's decision to prepare a Programmatic Environmental Impact Statement (PEIS). The DPP serves as the basis for the proposed action to be evaluated in the PEIS, and these comments apply to both the DPP and PEIS request. As demonstrated below, the OCS waters off North Carolina's coast are not suitable for oil and gas leasing during the 2019–2024 Program.

These comments address the many considerations that make the 2019–2024 Program a bad proposition for North Carolina. The Secretaries of the N.C. Department of Environmental Quality, N.C. Department of Natural and Cultural Resources, N.C. Department of Commerce, and N.C. Department of Military and Veterans Affairs, as well as their respective staff experts, have contributed the following substantive evidence to explain why the waters off North Carolina's coast, including the Mid-Atlantic region, should be excluded from the 2019–2024 Program.

BACKGROUND

North Carolina is committed to protecting the economic and environmental vibrancy of its coastal region and entire state. North Carolina leaders have consistently identified critical issues for consideration in the development of previous OCS Leasing Programs. We also have requested that additional public hearings be held on our coast to hear feedback on the DPP from North Carolinians who would be most impacted by offshore oil and gas activities. Both of these requests have gone unanswered.

Pursuant to Section 18 of the Outer Continental Shelf Lands Act (OCSLA), the Secretary of Interior shall prepare, periodically revise, and maintain an oil and gas leasing program that the Secretary determines "will best meet national energy needs for the five-year period following its approval or reapproval.[2]" Furthermore, Section 18 of OCSLA directs the preparation and maintenance of such a leasing program to consider the "potential impact of oil and gas exploration on other resource values of the Outer Continental Shelf (OCS) and the marine, coastal, and human

[1] 83 FR 5, January 8, 2018 Notice of Availability of the 2019–2024 Draft Proposed Outer Continental Shelf Oil and Gas Leasing Program and Notice of Intent To Prepare a Programmatic Environmental Impact Statement
[2] Section 18 of the Outer Continental Shelf Lands Act 43 U.S.C. §1311

environments." The selection of the timing and location of leasing shall be done "to obtain a proper balance between the potential for environmental damage, the potential for the discovery of oil and gas, and the potential for adverse impact on the coastal zone." These comments are provided for the Secretary's consideration in all aspects of the decision-making process on a final 2019–2024 Program, pursuant to the OCSLA and any other applicable requirements.

GEOGRAPHICAL, GEOLOGICAL, and ECOLOGICAL CHARACTERISTICS

The Geography and Geology of the OCS Region Off North Carolina's Coast is Not Conducive to Oil and Gas Development

The location and narrow shape of the conceptual geologic plays present off the North Carolina coast do not provide for the large overlap of geological strata that is preferred in oil and gas development. First, about half of the Atlantic OCS conceptual geologic plays do not extend to the OCS areas off North Carolina's shore. Of the plays that do extend into North Carolina's OCS region, their locations prevent overlap. Two plays off the North Carolina coast start at Cape Hatteras and extend to the north into Virginia's OCS region and beyond. Two other plays start at Cape Hatteras and extend to the south and do not overlap geologically with the first two plays. Lastly, two more plays extend along the length of the state's offshore area, each with its limitations. One of these plays is very thin and is in water at depths of 3,500 feet. The other play, while wider, is in water depths of 8,500 feet or deeper. Overall, the North Carolina's OCS geological plays are narrower than other plays found along the coast and rarely overlap, a characteristic that generally limits the opportunity for oil and gas development.

There is one area in North Carolina's OCS with overlapping geologic plays located directly off Cape Hatteras. There are known geologic hazards that could induce failure in safety measures, as was determined when Mobil evaluated the Manteo block in 1987,[3] or induce submarine landslides.[4]

The known underwater landslides offshore of North Carolina could impact underwater wellheads and trigger disastrous results in each of the six geological plays off our coast. The United States Geological Survey (USGS) identified three major slides: the Currituck Slide that extends out from the northern border of the State; the Cape Lookout Slide that extends off the Outer Banks and; the Cape Fear Slide that extends out from the southern border of the

[3] Meekins, Keith L. (1999) Geology and Exploration of the Manteo Prospect off North Carolina. Marine Georesources and Geotechnology, 17, pp.117-122.
[4] Popenoe, Peter; Schmuck, E.A., and Dillon, W.P., 1993, The Cape Fear Landslide: Slope Failure Associated with Salt Diapirism and Gas Hydrate Decomposition, *in* Schwab, W.C.; Lee, H.J., and Twichell, D.C. (editors), Submarine Landslides: Selected Studies in the U.S. Exclusive Economic Zone, U.S. Geological Survey Bulletin 2002, 204pp.

State. Were oil- and gas-related activities to destabilize these slides, a tsunami could result.[5] A slide destabilization could also undermine the wellhead where blowout preventers are located and result in a disaster similar to *Deepwater Horizon*.

These known geological hazards coupled with the unique physical oceanographic area off Cape Hatteras at the confluence of the two major surface currents of the western Atlantic Ocean—the Gulf Stream and the Labrador Current—present significant complications for subsurface resource development due to the instability of the marine floor and severe surface weather. According to the National Parks Service's Cape Hatteras National Seashore, these natural elements, including devastating hurricanes and nor'easters "form a navigational nightmare that is feared as much as any in the world." It is estimated that over 1,000 vessels have been lost near Cape Hatteras.[6]

Lastly, the area off Cape Hatteras where the Gulf Stream and Labrador Current converge also creates an amplified hazard for accidental releases. Any materials released will flow into the Gulf Stream or Labrador Current and pollute the United States' Atlantic coastline and international fishing waters. BOEM should know that oil spills potentially impact more than coastal habitats.[7] The *Deepwater Horizon* disaster shows that unmitigated releases of oil recognize no jurisdictional boundaries.

The Oil and Gas Resource Potential in the OCS Region off North Carolina's Coast is Minor

The estimated oil and gas resources in the OCS Region off North Carolina's coast are minimal compared to estimated resources in other OCS planning areas across the country. Furthermore, the United States' current high level of domestic oil and gas production and large volume of energy exports demonstrate the lack of need to exploit the Atlantic OCS waters for oil and gas resources.

The RFI letter submitted to you in August 2017 by the N.C. Department of Environmental Quality (DEQ) referenced the 2016 BOEM Inventory of Technically and Economically Recoverable Hydrocarbon Resources of the Atlantic Outer Continental Shelf as of January 1, 2014. The DEQ letter referenced the Inventory for the average estimated amount of Undiscovered Technically Recoverable Resources (UTRR) in the Atlantic OCS. The RFI letter correctly indicated that the UTRR in the Atlantic OCS is significantly less than that estimated in each of the three other planning areas under consideration.

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[5] U.S. ten Brink, , Chaytor, J.D., Geist, E.L., Brothers, D.S., and Andrews, B.D. 2014. Assessment of Tsunami Hazard to the U.S. Atlantic Margin. Marine Biology. 353: 31-54. http://dx.doi.org/10.1016/j.margeo.2014.02.011

[6] "Lost to the Perils of the Sea." Cape Hatteras National Seashore. National Park Service, November 1, 2017. Web. March 1, 2017.

[7] Bureau of Ocean Energy Management. 2018. 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp. 7-44

Subsequent review of BOEM's Risked Undiscovered Economically Recoverable Oil and Gas Resources[8] (UERR) reveals that the $60/barrel of oil and $3.20/mcf pricing scenario are an approximate match with current commodity pricing. On March 1, 2018, natural gas priced at $2.66 per mcf[9] (Henry Hub) and global oil prices averaged $62 per barrel.[10] Applying this pricing scenario, the amount of oil economically recoverable at $60/bbl is approximately 80% of the UTRR and the amount of natural gas economically recoverable at $3.20/mcf is only 18% of the UTRR in the Atlantic OCS, and is illustrated by comparison with the other planning areas in Table 1.

TABLE 1. Oil and Gas Resource Estimates

Location	Oil UTRR - billion bbls (% of total)	Oil UERR - billion bbls (% of total) @$60/bbl	Gas UTRR - trillion ft^3 (% of total)	Gas UERR – trillion ft^3 (% of total) @ $3.20/mcf
Alaska	27.28 (30.1%)	8.38 (14.4%)	131.55 (40.1%)	9.36 (9.3%)
Pacific	10.20 (11.3%)	6.45 (7.1%)	16.10 (4.9%)	8.29 (8.2%)
Gulf of Mexico	48.46 (53.5%)	39.55 (68.0%)	141.76 (43.3%)	74.67 (74.1%)
Atlantic	4.59 (5.1%)	3.76 (6.5%)	38.17 (11.6%)	8.41 (8.3%)
Mid-Atlantic	2.41 (2.7%)	2.06 (3.5%)	24.63 (7.5%)	4.38 (4.3%)

The above table demonstrates that when applying BOEM's resource estimates at the mid-range of economic output, the Atlantic OCS, and the Mid-Atlantic OCS waters are projected to be the least-economically productive of all the nation's OCS.

Applying an annual consumption rate of approximately 7.2 billion barrels of oil and 27.3 tcf of natural gas in the United States, the UERR volumes at the $60/barrel and $3.20/mcf

[8] Bureau of Ocean Energy Management. 2016. Assessment of Undiscovered Oil and Gas Resources of the Nation's Outer Continental Shelf, 2016. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp.8

[9] "Natural Gas – Henry Hub," Markets Insider. Business Insider, March 1, 2018. Web. March 1, 2018.

[10] "Oil Price Charts," OilPrice.com. March 1, 2018. Web. March 1, 2018.

respectively in the Mid-Atlantic would supply 104 days of oil and 58 days of natural gas demand domestically. This calculus assumes that these resources are used domestically, though they could be sold on the global market to satisfy foreign demand.

In addition, in recent years the United States has emerged as a leading exporter of energy resources. According to John Jessup, Executive Director of the North Carolina Propane Gas Association, more domestically produced propane gas is exported for foreign consumption than used to meet United States consumption demand.[11,12] The U.S. Energy Information Administration (EIA) of the Department of Energy reports that in 2016 the United States imported approximately 10.1 million barrels per day (MMb/d) of petroleum and exported about 5.2 MMb/d to over 100 countries, resulting in a net import of about 4.9 MMb/d of petroleum that year.[13] Regarding natural gas, EIA reports that the United States' natural gas production in 2016 was the second-highest level recorded, and in 2016 U.S. dry natural gas production accounted for approximately 97% of domestic natural gas consumption.[14] This increased domestic energy production has diminished net imports of natural gas over the last 10 years.[15]

Taken together, the importance of the aforementioned data is clear. Section 18 of OCSLA directs the Secretary of Interior to develop a National OCS Oil and Gas Leasing Program that "will best meet national energy needs for the five-year period following its approval or reapproval" and does not direct the Secretary to balance international payments and trade in this calculus.[16] Given current domestic oil and gas production, the volume of oil and gas exports the United States has sent to foreign countries, and the global energy market's trend towards increased generation and penetration of distributed renewable energy resources, the United States need not endeavor to exploit its frontier waters of the Atlantic OCS for relatively small amounts of oil and gas resources.

North Carolina's Unique Ecology is Incompatible with Oil and Gas Extraction and Development

North Carolina's unique ecology is incompatible with oil and gas extraction. North Carolina has approximately 325 miles of ocean beaches and 614,400 acres of submerged land and oceanic waters within the state's 3-mile Territorial Sea. Twenty-two barrier islands and two coastal

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[11] Jessup, J. (February 21, 2018). Financing Opportunities; Volkswagen Settlement Agreement: Propane as an Alternative Fuel. Presentation at the meeting of the North Carolina Energy Policy Council, Raleigh, NC.
[12] "U.S. Propane Prices and Crude Oil Prices Re-Link as Exports Increase," Energy Information Agency, U.S. Department of Energy, February 28, 2018, Web. March 1, 2018.
[13] "How Much Petroleum Does the US Import and Export?" Energy Information Agency, U.S. Department of Energy, February 28, 2018, Web. March 1, 2018.
[14] "Where Does our Natural Gas Come From?" Energy Information Agency, U.S. Department of Energy, February 28, 2018, Web. March 1, 2018.
[15] "U.S. Natural Gas Consumption, Dry Production, and Net Imports, 1950-2016," Energy Information Agency, U.S. Department of Energy, February 28, 2018, Web. March 1, 2018.
[16] Bureau of Ocean Energy Management. 2018. 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp.1-7

peninsulas are separated by 19 dynamic inlets and frame the state's 2.5 million acres of estuarine waters and over 10,658 miles of estuarine shoreline.[17]

North Carolina's coastline is unique among those of other states that border the Atlantic Ocean because of its distinctive offshore ecosystem that supports an exceptionally productive fishery. North Carolina's coastal and offshore waters lie at the juncture of two of the Atlantic coast's great marine ecosystems: the cool temperate Virginian province to the north and the warm temperate Carolinian province to the south.[18] The Northeast Continental Shelf Large Marine Ecosystem (Northeast LME) and Southeast Continental Shelf Large Marine Ecosystem (Southeast LME) meet at Cape Hatteras and North Carolina's OCS is fully comprised within the Mid-Atlantic Bight sub-region.[19]

On September 18, 2009, the then-governor established by executive order[20] the Science Advisory Panel on Offshore Energy (Advisory Panel) to evaluate and report[21] on the state's offshore potential energy sources and the shared offshore natural resources upon which those energy resources reside. The Advisory Panel described the deepwaters of the Blake Plateau in the Southeast as harboring some extremely unusual and valuable marine ecosystems. A deepwater coral wilderness stretches from North Carolina to Florida, including ancient reefs—some documented as more than a million years old—of slow-growing lophelia corals.[22,23] An area encompassing 23,000 square miles of these reefs has been designated as "habitat areas of particular concern" under the federal essential fish habitat doctrine by the South Atlantic Fisheries Management Council (SAFMC).[24] In this area, fishing impacts must be minimized, and non-fishing impacts must be managed through a consultation and elevation process. In addition, deepwater methane seep communities are just now being discovered; the one that is well-documented on the Blake Ridge[25] was also protected in the same action by the SAFMC. The SAFMC Habitat and Environmental Protection Advisory Panel also identified further as-yet-unexplored areas where deepwater coral discoveries are likely to be made.

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[17] A total of 10,658 miles of estuarine shoreline have been mapped in North Carolina's 20 coastal counties. North Carolina Department of Environment and Natural Resources, Division of Coastal Management (2015) *North Carolina Estuarine Shoreline Mapping Project, 2012 Statistical Reports*.

[18] Continental Shelf Associates, Inc. 1983. North Carolina Fisheries and Environmental Data Search and Synthesis Study: Final Report. Continental Shelf Associates, Inc. Jupiter, FL.

[19] Bureau of Ocean Energy Management. 2018. 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp. 7-25

[20] NC Exec. Order No. 2009-23 (September 18, 2009), http://digital.ncdcr.gov/cdm/fullbrowser/collection/p16062coll5/id/11933/rv/compoundobject/cpd/11936

[21] Governor's Scientific Advisory Panel on Offshore Energy. 2011. Report of The Governor's Scientific Advisory Panel on Offshore Energy Raleigh (NC): Governor's Scientific Advisory Panel on Offshore Energy.

[22] Ross, S.W., and M.S. Nizinski. 2007. State of deep coral ecosystems in the U.S. southeast region: Cape Hatteras to southeastern Florida. Pp. 233-270 in Lumsden, S.E., T.F. Hourigan, T.F. Bruckner, and G. Dorr (eds.). The State of Deep Coral Ecosystems of the United States. NOAA Technical Memorandum CRCP-3. Silver Spring, MD.

[23] Ross, S.W., and A.M. Quattrini. 2007. The fish fauna associated with deep coral banks off the southeastern United States. Deep-Sea Research Part I 54:975–1,007.

[24] South Atlantic Fisheries Management Council. 2009.

[25] Van Dover, C.L. 2002. Biological communities at Blake Ridge seeps: faunal distributions and trophic interactions.

Additionally, the southward flowing cold-water Labrador Current and the northward flowing warm water Gulf Stream, combined with the Western Boundary Undercurrent, converge off the coast of North Carolina. This convergence of currents results in an upwelling of nutrient-rich waters that, when combined with unique bathymetric features, creates an area of exceptional oceanic productivity.

Moreover, North Carolina has a higher diversity of marine mammals than anywhere along the east coast of the United States or the Gulf of Mexico. This high diversity is reflected in the variety of marine mammals stranded along North Carolina's coast, more than are found on many coastlines around the world.[26] In fact, the only other areas that compete with the marine mammal diversity found in North Carolina's OCS waters are off the coasts of Argentina and Australia. Oil and gas drilling and development and accidental releases off our coast could negatively impact these sensitive species. North Carolina's offshore waters support six species of baleen whales, including the endangered Northern Right Whale, and 24 species of toothed whales, four of which are beaked whales. In total, North Carolina's OCS region supports 34 species of cetaceans (whales, dolphin, and porpoises), resulting in the state's unparalleled cetacean diversity.[27]

In addition, there exists a defined Biologically Important Area for the North Atlantic right whale calving extending from the coast to the 25m depth contour from Cape Canaveral, Florida to Cape Lookout, North Carolina.[28] Further, a moderate density of minke whales are found south of Cape Hatteras in the winter months, and a high density of North Atlantic right whales in near-shore calving grounds are found in state waters of North Carolina south of Cape Fear.[29] Multiple stocks of bottlenose dolphins inhabit North Carolina estuarine and offshore waters. Atlantic spotted dolphins are also common in state and federal waters offshore of North Carolina. Due to the presence of so many marine mammals, North Carolina regulates and participates in various efforts to protect them as an integral part of our coastal ecosystem. For example, North Carolina participates in the Bottlenose Dolphin Take Reduction Team, and North Carolina state waters are regulated under the Take Reduction Plan for the Bottlenose Dolphin. The North Carolina Division of Marine Fisheries, North Carolina Wildlife Resources Commission, North Carolina State University, University of North Carolina at Wilmington, and the North Carolina Maritime Museum are part of the Marine Mammal Stranding Network, which responds to reports of marine mammal stranding on our coast.

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[26] Byrd, B. A. Hohn, G. Lovewell, K. Altman, S. Barco, C. Harms, W. McLellan, K.T. Moore, P. Rosel, and V. Thayer. 2014. Strandings as Indicators of Marine Biodiversity and Human Interaction in North Carolina. Fisheries Bulletin, 112: 1-23. doi. 10.7755/FB.112.1.1

[27] Cox et al. 2006. Understanding the impacts of anthropogenic sounds on beaked whales. J. of Cetacean Research management. 7(3): 177-187.

[28] LaBreque, E., C. Curtice, J. Harrison, S.M. Van Parjis, and P.N. Halpin. 2015. Biologically Important Areas for Cetaceans Within U.S. Waters-East Coast Region. Aquatic Mammals 4(1), 17-29. doi: 10.1578/AM.41.1.2015.17

[29] Roberts, J.J., B.D. Best, L. Mannocci, E. Fujioka, P.N. Halpin, D.L. Palka, L.P. Garrison, K.D. Mullin, T.V.N. Cole, C.B. Khan, W.A. McLellan, D.A. Pabst, and G.G. Lockhart. 2016. Habitate-Based Cetacean Density Models for the U.S. Atlantic and Gulf of Mexico. Scientific Reports, 6, 22615 doi:10.1038/srep22615

The North Carolina Maritime Museums compiled in October 2013, and revised in April 2016, a list of 39 marine mammals historically encountered in state waters.[30] North Carolina's OCS waters support four species of seals (harbor, harp, gray, and hooded) and one species of manatee. Furthermore, seals in North Carolina are not rare. Our state coast has live seals hauling out on beaches, and strandings (both live and dead) occur each year. The endangered marine mammals in North Carolina's OCS waters include the North Atlantic right whale, blue whale, fin whale, sei whale, and sperm whale. The Florida manatee has been located off North Carolina's coast. The state's beaches also provide nesting grounds for the threatened loggerhead and green turtles and endangered leatherback turtles.[31]

BOEM divided the Atlantic planning area into two ecoregions based on the Northeast and Southeast LMEs, and the DPP states that both LMEs are productive and support multiple commercial fisheries. In its analysis, BOEM predicts that the Southeast ecoregion has the second highest environmental sensitivity score of the ecoregions, due in part to a predominance of saltwater marshes, swamps, and other vegetated wetlands along the shores. In addition, the environmental sensitivity of this ecoregion was driven by a moderately high species score—which included the highest score for marine mammals and sea turtles in all of the BOEM ecoregions.[32] In its discussion, BOEM admits that "all planning areas are sensitive to oil and gas activities—some more so than others."

OTHER USES of the SEA and SEABED and ANTICIPATED USES of the RESOURCES and SPACE of the OCS

North Carolina's Fisheries are Vital to the State's Economy and Jeopardized by Oil and Gas Development

North Carolina's OCS lands and waters provide vital support to our state's commercial and recreational fishing industries and would be jeopardized by offshore oil and gas development. In 2016 there were approximately 2,973 active commercial fishermen and 575 seafood dealers in North Carolina.[33] The commercial fishing industry in 2016 supported an estimated 7,410 jobs, $166 million in income, and a $388.32 million economic impact for the state.[34] In the same year, approximately 1.4 million recreational anglers embarked on approximately 5.4 million trips in North Carolina's coastal waters. Coastal recreational fishing activity supported an estimated 15,069 jobs, $621 million in income, and $1.57 billion economic impact to the

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[30] Hairr and Rittmaster, Checklist of Marine Mammals Historically Encountered in North Carolina Waters, 2016.
[31] "NC Sea Turtle Project" Division of Wildlife Management. North Carolina Wildlife Resources Commission, January 6, 2017. Web. March 1, 2017.
[32] Bureau of Ocean Energy Management. 2018. 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp. 7-5
[33] NC Division of Marine Fisheries' License and Statistics Section Annual Report (2017) http://portal.ncdenr.org/web/mf/commercial-fishing-annual-reports
[34] DEQ's Division of Marine Fisheries 2017 License-Statistics Annual Report. This report cites 2,973 licensed commercial fishermen with landings (actively caught/sold fish), a $388,325,000 economic impact (total sales), and 7,410 commercial fishing jobs.

state economy.[35] Combined, commercial and recreational fishing activities support an estimated 22,500 jobs, $787 million in income, and $1.96 billion in annual economic impact.

This economic activity occurs in counties that have limited sources of employment and revenue. BOEM reports that in 2009, recreational fishing expenditures in North Carolina accounted for more than half of the total value added to the Mid-Atlantic economy.[36] It is vitally important to protect and sustain the natural resources on our coast to support the state's fishing industry and associated cultural heritage.

Most fisheries in North Carolina's offshore waters are managed by the National Oceanic and Atmospheric Association's National Marine Fisheries Service (NMFS) and the South Atlantic and Mid-Atlantic Fishery Management Councils, under fishery management plans adopted for commercially-important species. The South Atlantic Fishery Management Council, acting through NMFS, designated several areas offshore of North Carolina as Essential Fish Habitat; a subset of these areas is designated as Habitat Areas of Particular Concern. Habitat Areas of Particular Concern are designated where they are considered particularly important for managed species or species complexes due to the importance of the ecological functions they provide and where they are at risk due to their rarity or sensitivity to human degradation. These designated areas include The Point, Ten Fathom Ledge, Big Rock and the shoals of Cape Hatteras, Cape Lookout and Cape Fear. Essential Fish Habitat is important to migratory species such as king and Spanish mackerel, dolphin, tuna, and cobia, as well as the snapper-grouper complex. The area off Cape Hatteras known as "The Point" is used year-round for commercial fishing activities and recreational fishing charters and tournaments. The North Carolina Division of Marine Fisheries identifies as many as 43 annual saltwater fishing tournaments in any given calendar year.

North Carolina's offshore deepwater canyons sustain large populations of tilefishes. The habitats and species use patterns of those habitats are reported in detail in the Essential Fish Habitat sections of the fishery management plans of the Mid-Atlantic Council.[37] In addition, the Atlantic States Marine Fisheries Commission maintains active work characterizing habitat needs of diadromous and other species under its management, and the Commission issued a comprehensive habitat source document.[38] Relative value of different estuaries in the Mid-

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[35] DEQ's Division of Marine Fisheries 2017 License-Statistics Annual Report. This report cites 1,888,821 participants, a $1,575,947,000 economic impact (total sales), and 15,069 jobs related to recreational fishing.

[36] Bureau of Ocean Energy Management. 2018. 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp. 6-29

[37] "Fishery Management Plans and Amendments" Mid-Atlantic Fishery Management Council. Web. March 5, 2018.

[38] Atlantic States Marine Fisheries Commission. 2009. Atlantic Coast diadromous fish habitat: a review of utilization, threats, recommendations for conservation, and research needs. Habitat Management Series No. 9. 464 pp.

Atlantic region to various life-history stages of important animals is summarized in the reports of the Estuarine Living Marine Resources Program.[39]

Estuarine-dependent species, such as flounder, shrimp, black sea bass, and grouper also migrate from estuarine nursery areas in state waters to both offshore habitats and Essential Fish Habitat in federal OCS waters during their life cycle. Due to the importance of these species to the state's economy, it is vital that Essential Fish Habitats are protected from direct, indirect, and cumulative impacts associated with oil and gas drilling and development in the OCS waters off North Carolina.

The shelf south of Cape Lookout contains extensive Meiocene hardgrounds that sustain extensive reef fish populations; the shelf-edge carbonate reefs support spawning areas for many snappers and groupers. An unusual number of deepwater spawners exhibit cross-shelf life histories, where larvae spawned at the shelf-edge are tied to inshore nurseries, using mid-shelf reefs along the way. These include gag and snowy groupers, speckled hind and black sea bass. Coastal migratory pelagic species (e.g., mackerels, cobia, dolphinfish, and wahoo) use currents to deliver larvae and upwelling zones to deliver food, sustaining large and rapidly growing populations. Extensive literature on warm temperate regional habitat use patterns is presented in the South Atlantic Fishery Management Council Final Essential Habitat Plan[40] and Fishery Ecosystem Plan[41]and in the South Atlantic ELMR document.[42]

The Gulf Stream provides a key pathway for movement of spawned larvae for many reef and pelagic fishes and invertebrates. Snappers and grouper larvae can be moved long distances from spawning sites during the four-to-six weeks they are in the plankton, linking reefs off North Carolina to spawning sites far up-current in the broader Atlantic Basin.[43] Many other fish species—including large pelagic-like swordfish and tunas—have shaped their spawning patterns to take advantage of these highways in the sea. Warm-core rings swirling off the Gulf Stream carry southerly biota far into the North Atlantic; it is not unusual for tropical fish larvae to show up in warm shallow waters here in North Carolina and beyond.[44] In addition, whole portions of warm marine systems can be caught up and transported by these currents. These currents that transport marine life would also carry oil releases. Materials would travel among the currents and could cause impairment for the length of the flows.

The impacts of an offshore oil release will affect not only North Carolina's OCS and coastline, but also the state's estuarine system. The Albemarle-Pamlico estuary was named an estuary of significance by the United States Congress in 1987 and is the second-largest estuarine complex in

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[39] Estuarine Living Marine Resources Program. 1994. Distribution and abundance of fishes and invertebrates in Mid- Atlantic estuaries. NOAA/NOS ELMR Report No. 12. 280 pp.
[40] South Atlantic Fisheries Management Council 1998.
[41] South Atlantic Fisheries Management Council 2010.
[42] Estuarine Living Marine Resources Program. 1991. Distribution and abundance of fishes and invertebrates in southeast estuaries. NOAA/NOS ELMR Report No. 9. 167 pp.
[43] Cowen, R.K., and S. Sponaugle. 2009. Larval dispersal and marine population connectivity. Annual Reviews in Marine Science 1:443-466.
[44] Hare, J.A., and P. E. Whitfield. 2003. An integrated assessment of the introduction of lionfish (Pterois volitans/miles complex) to the western Atlantic Ocean. NOAA Technical Memorandum NOS NCCOS 2. 21 pp.

the lower 48 states. The Albemarle-Pamlico estuary is particularly susceptible to long-term pollution impacts from even small leaks and spills because of the system's slow rate of water exchange. The state's agencies, in cooperation with local governments, implement several environmental protection programs to protect the integrity of the Albemarle-Pamlico estuary. It is imperative to prohibit offshore drilling and development activities off North Carolina's coast, which would negate these state and local efforts and imperil this unique national resource.

Interference with North Carolina's Military Operations Along and Off the North Carolina Coast

North Carolina has a long and well-established relationship with U.S. Department of Defense (DOD) and is the proud home of 113,000 active duty and reserve military personnel.[45] The state closely partners with the commanders of major military installations based in North Carolina and the offices to which they report in Washington, D.C. This partnership is critical so that installation commanders can achieve their respective missions in training, equipping, and preparing their soldiers, sailors, Marines, and airmen to protect and defend our nation. North Carolina is home to Marine Corps Base Camp Lejeune, Marine Corps Air Station Cherry Point, Marine Corps Air Station New River, Seymour Johnson Air Force Base, and Fort Bragg.

Military exercises conducted in North Carolina and from North Carolina–based military installations are vital not only to national defense and security, but also to the economies of North Carolina and the nation. Oil and gas leasing and development off North Carolina's coast could jeopardize both military readiness and the North Carolina economy.

North Carolina need not suffer a serious catastrophe related to oil and gas development to put our military operations in very real danger of suspension or termination. The normal operations of oil and gas development in the region would be enough to hinder military training exercises off the North Carolina coast, as discussed below. Moreover, the repercussions of a catastrophic event could be devastating. The DPP acknowledges that DOD conducts training, testing, and operations in offshore operating and warning areas, undersea training ranges, and special use or restricted airspace in the OCS.[46]

In October 2015, DOD released its Mission Capability Planning Assessment for the most recent DPP (2017–2022). In short, the Assessment provides that "[w]ithin the Mid-Atlantic Planning Area, DOD identified locations where subsurface oil and gas infrastructure may be compatible." That same assessment stated, however, that "DOD would request that no permanent oil and gas surface structures be constructed in these areas.[47]" In fact, maps[48] that show the extent of DOD's analysis in summarizing the Atlantic planning illustrate that most of the OCS waters off North

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[45] "Military Active-Duty Personnel, Civilians by State," Data. Governing, September 2017. Web. March 6, 2018.
[46] Bureau of Ocean Energy Management. 2018. 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp. 6-29
[47] Office of the Assistant Secretary of Defense for Readiness; Office of the Assistant Secretary of Defense for Energy, Installations and Environment; Office of the Director, Operational Test and Evaluation. 2015. DOD Mission Compatibility Planning Assessment: BOEM 2017-2022 OCS Oil and Gas Leasing DPP. (VA) Department of Defense. p. 2
[48] Ibid, p. 30

Carolina are designated by DOD as warning areas, areas with site-specific stipulations, areas subject to an outright ban on permanent oil and gas surface structures, or areas subject to an outright ban on oil and gas activity.

Important military assets and activities along the North Carolina coast—for example, military bases, firing ranges, bombing ranges, and training areas—impose several limitations on future offshore oil and gas development. For example, the presence of multiple shipping and exploratory sea vessels and oil derricks pose a risk of obstructing visibility and encroaching on existing flight paths. The U.S. Marine Corps and the U.S. Navy make heavy use of Onslow Bay and central coastal areas for training and operations. The Dare County bombing range imposes air space limitations. Offshore operations by the U.S. Navy, particularly given the proximity of the Norfolk Naval Station and its associated facilities, are also significant. Seymour Johnson and MCAS Cherry Point routinely run exercises in the area that would be affected by any proposed offshore oil and gas leasing. And throughout the year Camp Lejeune and Fort Bragg run joint or special exercises in the area, involving military units from across the United States. Camp Lejeune is the largest amphibious training base in the United States and is home to the II Marine Expeditionary Force along with U.S. Marine Corps Special Operations Command.

Through the N.C. Department of Military and Veterans Affairs, the State Military Advisory Commission, and the North Carolina Commanders' Council, North Carolina continues to actively support the military with valuable resources. These bodies work closely together to ensure support of the military's ability to train by managing encroachment and compatible resource use; coordinating land, sea, and air management issues; and developing a combined mission footprint for DOD and the state. These bodies also address critical environmental and transportation challenges.

Loss or reduction of the ability to conduct routine and special operations exercises in this area stands to weaken our national defense and future military readiness requirements. Base commanders have described to state officials the critical need for these training exercises. As the focus of the military and national defense shifts to threats in the Pacific and Indochina spheres, it is vital to retain training grounds that uniquely mirror their topography and geographic characteristics as the coast of North Carolina does.

Because the military is the second largest sector of North Carolina's economy, adverse impacts from oil and gas development would be felt throughout the state economy. North Carolina has the fourth-largest active and reserve military population in the nation.[49] The military contributes $66 billion in gross state product and $34 billion in personal income.[50] More than 575,000 individuals are either directly employed by the military or work in the private sector providing goods or services that support the military's presence in North Carolina.[51]

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[49] "Military Active-Duty Personnel, Civilians by State," Data. Governing, September 2017. Web. March 6, 2018.
[50] Labor and Economic Analysis Division. 2015. The Economic Impact of the Military on North Carolina. Raleigh (NC): North Carolina Department of Commerce, pp. 1
[51] Ibid. pp.11

Not only would offshore drilling for oil and gas resources threaten the military's ability to conduct operations, it also would risk the economic vitality of local communities. For example, Seymour Johnson Air Force Base and Marine Corps Base Camp Lejeune are in rural Wayne and Onslow counties, respectively. These bases are the economic core of those communities, and the loss of training capabilities would be devastating to local residents. Reducing these major training capacities would undoubtedly cause ripple effects throughout our state's economy.

North Carolina urges BOEM to protect and support our men and women in uniform, as well as their mission, by keeping their vital training grounds free of interference and obstruction from oil and gas development. Doing so also will protect the North Carolina economy.

Oil and Gas Development Jeopardies Renewable Energy Opportunities in North Carolina's OCS

Development of oil and gas resources off North Carolina's coast would jeopardize renewable energy opportunities in the same general area. In March 2017, Avangrid Renewables, LLC won the lease auction for the 122,000-plus acre Kitty Hawk Wind Energy Area (WEA) with a bid of over $9 million. The lease was executed with BOEM on November 1, 2017, and Avangrid is presently developing its Site Assessment Plan. Upon approval of the plan, Avangrid will have 4½ years to submit its construction and operations plan. The potential environmental and ecological impacts resulting from offshore wind energy generation present a fraction of the risks posed by offshore oil and gas drilling and development. This determination is substantiated in BOEM's National Environmental Policy Act review and Finding of No Significant Impact for the now-operational Block Island Wind Farm and Transmission System located off the coast of Rhode Island.[52]

The Kitty Hawk WEA is located in the same offshore region that BOEM proposes for oil and gas drilling and development in North Carolina's OCS waters. Kitty Hawk and two other WEAs off North Carolina's coast—Wilmington East and Wilmington West—have been vetted by the DOD and are not conflicted out. Based on investor and developer interest, North Carolina's OCS waters hold great potential for future renewable energy generation. Co-locating two separate incompatible large-scale energy projects increases the potential for user conflicts, environmental impacts, and accidental releases. The best way to mitigate these potential use conflicts is to remove North Carolina's OCS waters from further consideration in the federal oil and gas leasing program.

[52] Bureau of Ocean Energy Management. 2014. Finding of No Significant Impact: Block Island Wind Farm and Transmission System. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp. 106

The LOCATION of NORTH CAROLINA'S OCS with RESPECT to the RELATIVE NEEDS of the REGIONAL and NATIONAL ENERGY MARKET

North Carolina's Reliable and Diverse Domestic Energy Production Provides Supply without the Need for OCS Oil and Gas Development

National and regional energy demands do not require drilling and production of the relatively small offshore oil and gas resources off the coast of North Carolina. Our residents already enjoy comparatively low per capita energy costs, access to a diverse supply of energy resources, and an established onshore energy infrastructure. According to EIA, North Carolina has a total annual energy consumption per capita ranked in the bottom third of the United States.[53] North Carolina's power generation is supplied by a diverse resource portfolio that includes solar, hydropower, biogas, nuclear, natural gas, coal, and wind.

In 2007, North Carolina enacted the Southeast's first Renewable Energy Portfolio Standard[54] and now boasts one of the most robust clean and diverse energy portfolios in the nation. More than 6% of our state's electric supply is met by renewables. Legislation enacted in 2017—Competitive Energy Solutions for North Carolina[55]—positions North Carolina to benefit from at least 2,600 MW of new solar capacity over the next five years. North Carolina currently ranks 2nd for installed solar capacity in the United States. In the western region of the state, approximately 2,000 MW of hydropower is operational. The American Biogas Council identified North Carolina as the 3rd best state in the nation for methane production potential from biogas sources,[56] with particularly high resource potential found in the eastern region of the state. In addition, power generated at five nuclear facilities comprises nearly 33% of the state's power generation portfolio.

North Carolina is home to the Southeast's only operational utility-scale wind power generating facility. Located in Perquimans County and Pasquotank County, Avangrid's Amazon Wind Farm, US East,[57] boasts one-hundred and four 2 MW wind turbines with a total nameplate capacity of 208 MW. According to Avangrid, the facility generates enough electricity to power 61,000 homes annually. The facility spans 22,000 acres and is leased from approximately 60 local land owners. The facility's total permanent footprint is less than 200 acres and local land owners continue to farm corn, soybeans, and wheat on lands under lease. Amazon Wind went into operation in 2017, and Avangrid became the largest single taxpayer

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[53] Energy Information Administration. June 2017. State Energy Consumption Estimates, 1960 through 2015, Table C13, Energy Consumption per Capita by End-Use Sector, Ranked by State U.S. Department of Energy, Energy Information Administration, pp.18

[54] Promote Renewable Energy/Baseload Generation, S3, 2007 Regular Session, North Carolina General Assembly.

[55] Competitive Energy Solutions for North Carolina, H589, 2017 Regular Session, North Carolina General Assembly.

[56] "Biogas State Profile: North Carolina," American Biogas Council. August 7, 2015. Web. March 6, 2018.

[57] "About Amazon Wind," Avangrid Renewables. Web. February 15, 2018.

in both Perquimans County and Pasquotank County, with payments of over $381K and $260K, respectively.

EQUITABLE SHARING of DEVELOPMENTAL BENEFITS and ENVIRONMENTAL RISKS AMONG the VARIOUS REGIONS

The Long Distance to Existing Refineries Means North Carolina will Bear the Burdens of Environmental Risk without Receiving Development Benefits

BOEM acknowledges that in the event oil and gas activities proceed in OCS areas, like the Atlantic OCS, the regional benefits would be delayed due to lack of existing infrastructure.[58] Negative impacts to the fisheries, coastal area, and uses of the waters off North Carolina's coast will occur if offshore oil drilling and development proceeds as proposed under the DPP. However, the monetary gains that are often cited as the benefit of oil operations, mainly through construction and oil refinery and other ancillary jobs, are unlikely to occur in North Carolina. Based on information collected by EIA, there is not a refinery of any size located in North Carolina, while there is a cluster of already operational high-capacity oil refineries in the northeast United States. The distance between North Carolina's OCS waters and this cluster of refineries, combined with the known coastal geography presents obstacles to development of a pipeline capital project that could link the two, especially when the same distance could be easily traversed by vessel.

If a foreign corporation secures a lease for drilling and production in North Carolina's OCS waters and transports recoverable oil and gas outside the United States for refining, then any tangible benefits to North Carolinians in the way of increased jobs and wages are lost to the global marketplace. Instead, North Carolina bears all the risk of such activity and stands with no potential for gains. Without construction or refinery jobs, the benefits to North Carolina are diminished while the environmental risks remain high. Even if jobs came to North Carolina, the benefits of those jobs do not outweigh the potential economic harm posed by OCS drilling and development. These are the very inequities that OCS Lands Act strives to avoid. The remedy for these gross inequities is to exclude the waters off North Carolina from further consideration in this process.

While federal legislative proposals to provide royalties and revenue sharing to Atlantic Coast states have been filed, there is neither an existing law nor the prospect of Congress passing one to ensure oil or gas corporations share the monetary benefits of any resources extracted from the Atlantic OCS with the adjacent states. It would be imprudent to assume that any dim potential for revenue sharing could or would offset the considerable environmental and economic risk North Carolina would assume in the event of offshore drilling in off the Atlantic Coast, especially in the Mid-Atlantic region. As BOEM acknowledged in the DPP, "even with mitigation measures in place, certain [environmental] impacts could be deemed as significant and irreversible."[59] To put this in context, *Deepwater Horizon* cleanup costs continue to accumulate, and according to the

[58] Bureau of Ocean Energy Management. 2018. 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp. 8-13

[59] Ibid. pp. 10-9

Associated Press, costs and claims have approached $65 billion.[60] At least $10 billion of this expense was born by tax payers, due to BP's settlement deductions.[61] In stark comparison, the cumulative revenues from offshore development in the Gulf states (Alabama, Louisiana, Mississippi, and Texas) for the eight years between 2009 and 2016 totaled $35.5 million.[62]

The calculus and methodology employed by BOEM in determining the NSV in the DPP is nebulous and unjustified.[63] For example, BOEM estimates the Net Social Value (NSV) for Unleased UERR at $100/bbl. This is nearly double the current price of oil and the current cost of crude oil futures for the 2019–2024 period. While the DPP specifies some assumptions, it is not transparent with the other assumptions underlying its NSV calculation, leaving stakeholders unable to comment on those assumptions. Further, the Environmental and Social Costs (ESC) are undervalued for the whole Mid-Atlantic planning area. Using the $100/bbl assumption, for instance, shows a cost of $2.9 billion for the Mid-Atlantic region. The economic engine of the coastal tourism industry (only one industry) in North Carolina (only one of four states in the Mid-Atlantic region) generates $3.4 billion annually. DPP estimates for the NSV overvalue the estimated extractable resources and undervalue the environmental and social risk posed to the Mid-Atlantic planning area, including North Carolina.

In September 2017, Governor Roy Cooper pledged North Carolina's commitment to the United States Climate Alliance. Climate Alliance states commit to the goal of achieving their collective share of greenhouse gas emissions (GHG) reductions necessary under the United States' commitment in the Paris Agreement. BOEM was correct to observe that GHGs from OCS activities contribute to the worldwide emissions inventory[64] and pose significant risk to North Carolinians now and for generations to come. BOEM, however, inappropriately decided[65] to ignore cost estimates for GHG emissions in calculating NSV by asserting that "GHGs in the form of CO_2, CH_4, and NOx, are included in the discussion of non-monetized impacts."[66] Excluding the cost of GHG emissions and the social costs associated with these air pollutants ignores the current and future impacts of global climate change. Downplaying these impacts ignores the consensus scientific understanding of climate change. If GHG costs were included in BOEM's analysis, the results would reveal a much less favorable NSV for many areas that BOEM evaluated.

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[60] "BP Deepwater Horizon Costs Balloon to $65 billion," Reuters, January 16, 2018. Web. March 1, 2018.
[61] "In BP's Final $20 Billion Gulf Settlement, U.S. Taxpayers Subsidize $15.3 Billion," Forbes, April 6, 2016. Web. March 6, 2018.
[62] "Trump to Stop Sharing Gulf of Mexico Crude Oil Royalties with States," CNBC, May 24, 2017. Web. March 1, 2018
[63] DPP pp. 5-16 to 5-25.
[64] Ibid, pp. 8-11
[65] Ibid, pp. 5-22
[66] Ibid, pp. B-9

North Carolina's OCS Waters and Coastline are Subject to Heightened Environmental Risks Due to Federal Deregulation Initiatives

On December 29, 2017, the Bureau of Safety and Environmental Enforcement (BSEE) within the Department of the Interior filed a proposal in the Federal Register[67] to amend regulations that "create unnecessary burdens on [oil and gas production] stakeholders." This proposal was filed less than a week before the publication of the DPP, and the proposal to weaken safety and environmental regulations directly conflicts with that proposed in the DPP. The DPP states that "[i]ndustry practices and government regulations minimize the frequency of … spills, and industry and government entities are prepared to respond or prevent spills from reach the coast should a spill occur."[68]

There is grave inconsistency between the work and efforts of BOEM and BSEE, to the detriment of all coastal states. The very regulations BSEE proposes to amend, revise, or remove are those protections that were published following the *Deepwater Horizon* wellhead blowout and subsequent disaster. The catastrophic oil spill lasted for 87 days, during which 4 million barrels of oil were released into the Gulf of Mexico. The Gulf coast continues to feel the effects today. BOEM relies on the existence of these "recently implemented safeguards, included increased requirements for the design, manufacture, repair, testing, and maintenance of blowout preventers, required downhole mechanical barriers, increased well design and testing requirements, and additional regulatory oversight"[69] as the basis for its assertion that catastrophic events like *Deepwater Horizon* will be even less likely than in the past.

Also concerning is the BSEE's December 7, 2017 decision to issue a stop-work order for the National Academies of Sciences' study of the Department of the Interior's Offshore Oil and Gas Operations Inspection Program. Rigorous research and evaluation such as the National Academies stopped study are critical to ensuring that disasters like *Deepwater Horizon* are prevented in the future. Without robust industry programmatic and management standards, our nation's OCS waters and coastline are at risk of a spill of national significance, which is defined as a spill that "due to its severity, size, location, actual or potential impact on the public health and welfare or the environment, or the necessary response effort is so complex that it requires extraordinary coordination of Federal, state, local, and responsible party resources to contain and clean up the discharge."[70]

These actions by BSEE reverses any progress made on safeguards and unacceptably place the risk of catastrophic disaster on the State of North Carolina.

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[67] "Oil and Gas and Sulphur Operations on the Outer Continental Shelf – Oil and Gas Production Safety Systems – Revisions," 82 Federal Register 249 (December 29, 2017), pp. 61703-61724.
[68] Bureau of Ocean Energy Management. 2018. 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp. 7-34
[69] Ibid. pp. 7-35
[70] 40 CFR §300

POTENTIAL for ADVERSE ENVIRONMENTAL, CULTURAL, and ECONOMIC IMPACTS on the NORTH CAROLINA COASTAL REGION

The Pillars of North Carolina's Coastal Economy, Tourism and Fishing, Would Be Threatened by Offshore Oil and Gas Development

North Carolina's coastal economy is highly dependent on tourism and fishing, both recreational and commercial.

A healthy tourism industry is vital to healthy economies on North Carolina's coast and statewide. The N.C. Department of Commerce has identified that coastal tourism in North Carolina is a $3.4 billion industry, supports more than 35,000 jobs, and produces nearly $333 million in annual state and local tax revenue.[71] The impact of a catastrophic accident from oil and gas development would devastate our coast and would not be limited to the beaches. Economic impacts would be felt throughout the coastal region and across the entire state. Even a minor accident would damage North Carolina's brand and ability to maintain market share against other attractive destinations. Visitors to the beaches, the vast majority of whom drive, spend time and dollars throughout the entire coastal region with every visit. Any impact to the beaches would be immediately felt beyond the coast.

The long-term loss would stretch across the state. North Carolina is known for its natural, scenic beauty. Recent research done by North Carolina's tourism office found that the state's "beauty" was the predominant theme mentioned when respondents described what sets North Carolina apart from other similar travel destinations.[72] The research showed that 38% of potential visitors surveyed value scenic beauty as key in "setting N.C. apart from other travel destinations." In fact, 15% of respondents specifically reported that the beach/coast is key in setting North Carolina apart from competitors. Anything that damages that perception would damage North Carolina's tourism industry.

In addition to threatening North Carolina's tourism revenue, oil and gas leasing off our coast would jeopardize the local jobs that tourism sustains. According to the N.C. Department of Commerce,

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[71] U.S. Travel Association, Research Department, "Economic Impact of Travel on North Carolina Counties" (2016) (data prepared for Visit NC using the Travel Economic Impact Model), https://partners.visitnc.com/economic-impact-studies. The statistics on the economic impact, jobs, and tax revenue of tourism are the result of modeling focused on tourism and include effects on many industries. The commercial and recreational fishing statistics provided in these comments come from N.C. DEQ's Division of Marine Fisheries and are the result of modeling that is separate from the tourism modeling. There may be overlap between the tourism statistics and the statistics on recreational and commercial fishing. The statistics in the paragraph accompanying this footnote are based upon the North Carolina's 20-county coastal region, which is vulnerable to the impacts of offshore oil and gas development.

[72] In 2016 Visit NC commissioned Bellomy Research to conduct a comprehensive usage and awareness study among potential travelers to the state of North Carolina. Objectives for this study included: Assess affinity toward travel to North Carolina, understand what emotions and feelings are associated with North Carolina, identify additional insights that are important for increasing travel to North Carolina. The study surveyed 2,519 respondents who were between the ages of 18 and 75, had an annual household income of $50,000 or more, and indicated some level of interest in visiting NC. In addition, the study did not include respondents whose trip purpose was solely to visit family that lived in the state or to visit vacation property, as those persons would already be inclined to visit. The purpose was to have respondents who were not already inclined to visit the state.

nearly 10% of all jobs in North Carolina are directly or indirectly sustained by tourism activities. Tourism led the state in job creation in 2016 with a 2.7% increase over the prior year. Those jobs are dependent on the state's natural assets and ability to deliver a quality vacation experience. Any risk to that ability is a risk to the economic vitality of North Carolina.

Oil and gas development off our shores, including oil platforms, would severely limit the areas within which our state's fishermen could fish for certain species. With the addition of offshore drilling, our state would suffer a major blow to a thriving economic engine that impacts thousands of people.

North Carolina Parks and Recreational Resources Would Be Threatened by Offshore Oil and Gas Development

North Carolina has many state parks, recreational areas, other natural resources, cultural resources, and ecological systems that would be put at risk by offshore oil and gas development in the Atlantic Coast, Mid-Atlantic region, and especially off North Carolina's coast.

According to the North Carolina Department of Natural and Cultural Resources (DNCR), offshore oil and gas development—in the Atlantic OCS waters, Mid-Atlantic region, and especially of North Carolina's coast—could have devastating effects on North Carolina's state parks and recreational areas.

DNCR experts in the Division of Parks and Recreation (DPR) manage approximately 231,443 acres of land throughout the State of North Carolina. Managed units include State Natural Areas, State Parks, State Recreation Areas, State Trails, State Rivers and State Lakes. DPR's goal is to manage these units through a consistent mission of:

- Conservation: To conserve and protect representative examples of North Carolina's natural beauty, ecological features, recreational and cultural resources within the state parks system;
- Recreation: To provide and promote safe, healthy and enjoyable outdoor recreational opportunities throughout the state; and
- Education: To provide educational opportunities that promote stewardship of the state's natural and cultural heritage.

Included in these managed units are several on the coast of North Carolina that serve to protect sensitive natural resources and provide unique recreational opportunities that could be adversely impacted by offshore oil drilling and onshore infrastructure. The inherent risk of oil spills both offshore and on land is a primary concern. The natural resources and facilities in these vulnerable areas encompass 10,752 acres, as shown in Table 2.

Twelve of DPR's units are adjacent to ocean waters or a sound. Key recreation and culturally significant units that could be impacted include Fort Macon, Hammocks Beach, Carolina Beach, Goose Creek, Jockey's Ridge State Parks, and Fort Fisher State Recreation Area. These park units welcome about 5.2 million visitors each year to the coast, as shown in Table 3, and contribute substantially to our state's coastal tourism economy. In addition to providing numerous

recreational opportunities—such as hiking, beach access, camping and fishing—rich historical resources are protected and interpreted. Fort Macon State Park, for example, is home to a restored Civil War-era fort. The conserved lands and waters of our coastal parks also protect many acres of priceless wetlands and shorelines that support our state's marine fisheries, a critically important and beloved part of our state's culture and economy. See Attachment D for a map of DPR coastal property and acreage.

TABLE 2. Acreage of Division of Parks and Recreation units in vulnerable coastal regions.

Name	**Acres**
Carolina Beach State Park	420
Fort Fisher State Recreation Area	287
Fort Macon State Park	424
Goose Creek State Park	1672
Hammocks Beach State Park	1611
Jockey's Ridge State Park	426
Bald Head Island State Natural Area	1260
Lea Island State Natural Area	25
Masonboro Island State Natural Area	106
Run Hill State Natural Area	123
Sandy Run State Natural Area	3133
Theodore Roosevelt State Natural Area	265
Salmon Creek State Natural Area (Authorized)	1000
Total	**10,752**

TABLE 3. Visitation at state parks in vulnerable coastal areas.

Name	**Annual Visitation**
Carolina Beach State Park	797,000
Fort Fisher State Recreation Area	793,000
Fort Macon State Park	1,544,000
Goose Creek State Park	299,000
Hammocks Beach State Park	175,000
Jockey's Ridge State Park	1,560,000
Total	**5,168,000**

In addition to parks that offer recreational opportunities, several state natural areas (which are home to our most sensitive lands and waters) are in vulnerable coastal areas. These resources include Bald Head Island, Lea Island, Masonboro Island, Run Hill, Theodore Roosevelt, and Salmon Creek state natural areas.

These coastal units include sensitive barrier islands and estuarine systems home to some of the state's and country's rarest species. The ecosystems found in our parks and natural areas provide nesting habitat for green and loggerhead sea turtles. These protected nesting habitats are critically

important to the turtle population due to increasing loss of habitat from development and harmful pollution. In addition to green and loggerhead sea turtles, the piping plover, a small shorebird which is recognized as both federally and state threatened, makes its home in a few of DPR's units. DPR units also offer protected beach and marsh for nesting and wintering shorebirds, and dependable habitat for rare and sensitive plants and grasses. Our ocean and sound-adjacent parks and natural areas are home to 30 endangered or threatened species of plants and animals, and several federal "species of concern," indicating they are likely to be given federal "threatened" status in the near future. Table 4 lists these species and their status.

The ecosystems protected by our parks in these vulnerable coastal areas are irreplaceable and critically important for tourism, education, recreational and commercial fishing, research, and the development of environmental stewardship for generations to come.

TABLE 4. Sensitive species of flora and fauna found in Division of Parks and Recreation units in vulnerable coastal areas (Source: North Carolina Natural Heritage Program Biotics Database, March 2018)

Species	**Status**	**Location**
Seabeach Amaranth	Threatened (U.S., N.C.)	Bald Head Island State Natural Area, Fort Fisher State Recreation Area, Fort Macon State Park, Lea Island State Natural Area, Masonboro Island State Natural Area
Loggerhead Seaturtle	Threatened (U.S., N.C.)	Bald Head Island State Natural Area, Fort Fisher State Recreation Area, Fort Macon State Park, Hammocks Beach State Park, Lea Island State Natural Area, Masonboro Island State Natural Area
Piping Plover	Threatened (U.S., N.C.)	Bald Head Island State Natural Area, Fort Fisher State Recreation Area, Hammocks Beach State Park
Green Seaturtle	Threatened (U.S., N.C.)	Bald Head Island State Natural Area, Hammocks Beach State Park, Fort Macon State Park, Masonboro Island State Natural Area
Fen Orchid	Endangered (N.C.)	Run Hill State Natural Area
Maritime Pinweed	Endangered (N.C.)	Jockey's Ridge State Park, Run Hill State Natural Area
Seabeach Knotweed	Endangered (N.C.)	Fort Macon State Park
Limesink Dog-fennel	Endangered (N.C.)	Carolina Beach State Park
Coral Bean	Endangered (N.C.)	Carolina Beach State Park
Peregrine Falcon	Endangered (N.C.)	Bald Head Island State Natural Area
Salt-meadow Grass	Endangered (N.C.)	Bald Head Island State Natural Area
Pinebarren Sunrose	Threatened (N.C.)	Bald Head Island State Natural Area
Bald Eagle	Threatened (N.C.)	Bald Head Island State Natural Area

Cabbage Palm	Threatened (N.C.)	Bald Head Island State Natural Area
Branched Gerardia	Threatened (N.C.)	Carolina Beach State Park
Big Three-awn Grass	Threatened (N.C.)	Carolina Beach State Park
Flaxleaf Seedbox	Threatened (N.C.)	Carolina Beach State Park
Shrubby Seedbox	Threatened (N.C.)	Carolina Beach State Park
Tracy's Beaksedge	Threatened (N.C.)	Carolina Beach State Park
Netted Nutrush	Threatened (N.C.)	Carolina Beach State Park
Dwarf Bladderwort	Threatened (N.C.)	Carolina Beach State Park
Beach Morning-glory	Threatened (N.C.)	Fort Macon State Park
Small-flowered Buckthorn	Threatened (N.C.)	Hammocks Beach State Park
Sand Heather	Threatened (N.C.)	Jockey's Ridge State Park, Sand Hill State Natural Area
Alewife Floater	Threatened (N.C.)	Salmon Creek State Natural Area
Eastern Pondmussel	Threatened (N.C.)	Salmon Creek State Natural Area
Comfortroot	Threatened (N.C.)	Theodore Roosevelt State Natural Area
Coastal Beak's Edge	Threatened (N.C.)	Carolina Beach State Park
Carolina Gopher Frog	Threatened (N.C.)	Carolina Beach State Park
Tough Bumelia	Threatened (N.C.)	Bald Head Island State Natural Area
Eastern Painted Bunting	Species of Concern (U.S., N.C.)	Carolina Beach State Park, Fort Fisher State Recreation Area, Fort Macon State Park, Hammocks Beach State Park
Crystal Skipper	Species of Concern (U.S., N.C.)	Fort Macon State Park, Hammocks Beach State Park
Dune Bluecurls	Species of Concern (U.S., N.C.)	Baldhead Island State Natural Area, Fort Fisher State Recreation Area, Fort Macon State Park
Diamondback Terrapin	Species of Concern (U.S., N.C.)	Fort Fisher State Recreation Area, Fort Macon State Park, Hammocks Beach State Park, Jockey's Ridge State Park, Masonboro Island State Natural Area
Venus Flytrap	Species of Concern (U.S., N.C)	Carolina Beach State Park
Southern Hognose Snake	Species of Concern (U.S., N.C.)	Carolina Beach State Park

North Carolina's Sensitive Natural Areas on the Coast Would Be Threatened by Offshore Oil and Gas Development

DNCR's Natural Heritage Program administers the state Nature Preserves Act, which protects environmentally sensitive natural areas, a significant portion of which would be at risk under the proposed OCS Oil and Gas Leasing Program. These areas are listed in Tables 6, 7, and 8 and include the following:

1. 34,478 acres within DNCR management at risk, such as Carolina Beach State Park, Fort Fisher State Historic Site, Roanoke Island Festival Park, and Jockey's Ridge State Park;
2. 105,844 acres of Dedicated Nature Preserves at risk, including natural treasures such as Buxton Woods Coastal Reserve, Masonboro Island National Estuarine Research Reserve, and Roanoke Island Marshes Game Land; and
3. 279,745 acres of Registered Heritage Areas managed by federal agencies in coordination with the Natural Heritage Program, such as Cape Hatteras National Seashore, Shackleford Banks at Cape Lookout National Seashore, and Cedar Island National Wildlife Refuge.

Over the years, North Carolina has invested significant resources to protect lands in coastal areas. Between the Natural Heritage Trust Fund and the Clean Water Management Trust Fund that investment totals $153,811,360 since 1996.

North Carolina has extensive coastal ecological resources that would be significantly impacted should oil spills occur in production areas or in transport facilities crossing the sounds. In addition to its 325 miles of ocean beach, North Carolina possesses vast estuaries: Its 2.5 million acres of estuaries is the largest expanse on the east coast. North Carolina hosts 10,658 miles of ocean and estuarine shoreline.[73] If BOEM allows oil and gas leasing off North Carolina's coast or along the Atlantic coast, all of North Carolina's coastal resources would be threatened by the risk of oil spills and other accidents.

Estuarine aquatic communities are represented by the sounds and near-shore waters along North Carolina's coast. North Carolina's estuarine aquatic communities represent the largest estuarine systems along the U.S. Atlantic coast and include the Albemarle, Pamlico, Core, Back, and Bogue Sounds. These sounds are collectively a part of the Albemarle-Pamlico National Estuary Partnership (APNEP), a cooperative effort jointly sponsored by North Carolina and Virginia state resource agencies, and the U.S. Environmental Protection Agency.

Around the estuarine shoreline lie more than 300,000 acres of tidal marshes and swamps, an exceptionally large expanse of natural habitat that is highly sensitive to oil spill impacts. North Carolina has the bulk of these distinctive marsh habitats in the United States. Part of that area is salt marsh and tidal swamp comparable to those in other mid-Atlantic states. However, much is wind tidal brackish and fresh water marsh. Wind tides are less predictable than regular astronomical tides, and would be especially difficult to clean up after oil spills. In addition, the more limited tidal flushing in these marshes may slow their recovery from oil intrusion. Several rare, disjunct, or endemic species, such as Carolina Watersnake and Aaron's Skipper, are associated with brackish marsh habitats in the sounds of the northern Coastal Plain. These brackish marshes are also habitat for the black rail, a species that has seen severe decline in recent years.

[73] A total of 10,658 miles of estuarine shoreline have been mapped in North Carolina's 20 coastal counties. North Carolina Department of Environment and Natural Resources, Division of Coastal Management (2015) *North Carolina Estuarine Shoreline Mapping Project, 2012 Statistical Reports.*

North Carolina's 10,658 miles of tidal shoreline play a key role in the life cycle of many migratory shorebirds, as described in North Carolina's 2015 Wildlife Action Plan.[74] Thus, any impacts to shorebird stopover, wintering, or breeding habitats (primarily beach, dune, estuarine, and coastal marsh habitats) would have a substantial impact on shorebird conservation throughout the Atlantic Flyway. There is national concern about the decline of many shorebird populations, including species found in North Carolina. The American Oystercatcher, Wilson's Plover, Red Knot, and Piping Plover are shorebird species with especially important populations in North Carolina. On the Atlantic coast of the United States, the eastern race of the American oystercatcher breeds from Massachusetts to Florida, with highest concentrations in Virginia, North Carolina, and Georgia. Oystercatchers both breed and winter here and are susceptible to harmful effects from oil spills.

The United States Fish and Wildlife Service recognizes two distinct populations of Piping Plover— the Great Lakes and Atlantic Coast/Great Plains populations. The Great Lakes population is listed as Endangered, and some birds from this population overwinter at the North Carolina coast. Piping Plovers of the Atlantic Coast population are year-round residents of the North Carolina coast— breeding, rearing young, and foraging along the shore.

Seabirds thrive in the offshore waters of the OCS and Gulf Stream. An area off Cape Hatteras, where the cool waters from the Labrador Current and the warm waters of the Gulf Stream meet, forms one of the richest and most important foraging areas for pelagic birds in the western Atlantic. The Gulf Stream is a critical region for pelagic birds in North Carolina between the months of May and October (especially that segment offshore from Oregon Inlet to south of Cape Hatteras) due to the interplay with the southbound Labrador Current, which creates an upwelling of nutrient-rich waters. Key pelagic species within this Gulf Stream region include the Black-capped Petrel, Bermuda Petrel, and other tubenoses (family Procellariidae). Bermuda Petrel are one of the rarest species in the world, once thought extinct until rediscovery of a small population in 1951. The Gulf Stream waters off of the North Carolina coast are one of the only locations in the country where these birds have been documented. North Carolina's inshore waters are a critical foraging zone during winter. Key pelagic species associated with this region include Northern Gannet and alcids (family Alcidae). Jaegers and Roseate Tern have been reported off the N.C. coast primarily as they travel between breeding grounds and wintering habitats.

Oil is a major environmental threat to pelagic species, especially along major shipping transportation corridors. Oil may be released during platform construction, offshore drilling, and shipping. Waterbirds are commonly injured by oil spills, chronic oil discharge in bilge water, and release of hazardous materials. Additionally, lights on drilling structures may disorient, attract, or confuse some pelagic birds, resulting in injury or death.

Several species of reptiles are also especially dependent upon North Carolina's coast. There are five marine turtle species found in North Carolina's coastal region: Loggerhead, Green, Hawksbill, Leatherback, and Kemp's Ridley sea turtles. Four of these species of sea turtle nest along North

[74] N.C. Wildlife Resources Commission, 2015 Wildlife Action Plan, http://ncwildlife.org/plan (last visited March 8, 2018).

Carolina's beaches: Loggerhead, Green, Leatherback, and Kemp's Ridley. Sea turtles also use waters off the coast of N.C. to feed on jellyfish during an annual migration up the coast in May.

The Diamondback Terrapin is found in brackish waters of the Atlantic Coast and is protected in North Carolina as a Species of Special Concern. Oil spills have been shown to impact respiration, blood chemistry, and salt-gland function in sea turtles. Spills in the vicinity of nesting beaches can place nesting adults, eggs, and hatchlings at significant risk. Oil deposits on the ocean floor can reduce food sources for all marine species and result in ingestion of tar balls. In addition to suffering effects from spills, sea turtles and other marine species can be negatively impacted by seismic surveys, operational discharge containing heavy metals, explosive platform removal, platform lighting, and noise from drill ships and production activities.

North Carolina contains numerous plant and animal species and natural communities that are considered globally imperiled (G1 or G2), meaning there are fewer than ten populations or occurrences known in the world. North Carolina's populations or natural areas are thus critical to their survival. An oil spill could be devastating for those exceptionally rare plants, animals and habitats associated with oceans and sounds, beaches, and tidal marshes.[75] In the oceans and sounds, particular attention should be paid to populations of Kemp's Ridley Seaturtle (*Lepidochelys kempii*) and Leatherback Seaturtle (*Dermochelys coriacea*), as well as the suite of fishes, marine mammals, and other animals of these estuarine and marine habitats that are similarly imperiled.

Along the beaches and dunes are elements such as Seabeach Amaranth (*Amaranthus pumilus*) and Crystal Skipper (*Atrytonopsis quinteri*). The North Carolina Wildlife Action Plan noted that "A genetic study of the Crystal Skipper indicated that its population is subdivided into three distinct groups, one at Fort Macon and nearby dredged-material island, one at Emerald Isle, and one at Bear Island." All of those known sites are in North Carolina, and as Natureserve's range extent comment notes, the species is "Known only from a few dunes on the North Carolina coast." North Carolina also contains plant communities with only a handful of examples, such as Tidal Red Cedar Forest (currently only eight records). Associated with marshes are equally rare plants and animals; examples include Godfrey's Sandwort (*Minuartia godfreyi*), Carolina Bishopweed (*Ptilimnium ahlesii*), and Riverbank Evening-primrose (*Oenothera riparia*).

TABLE 5. Globally critically imperiled species and natural communities with at-risk areas of North Carolina (Source – North Carolina Natural Heritage Program Biotics Database, March 2018)

Scientific Name	**Common Name**	**Taxonomic Classification**
Onslow Bay Intertidal Rock Outcrop		Animal Assemblage
Problema bulenta	Rare Skipper	Butterfly
Atrytonopsis quinteri	Crystal Skipper	Butterfly
Trichechus manatus	West Indian Manatee	Mammal

[75] Cite to studies of oil impacts on birds, if time.

Scientific Name	Common Name	Taxonomic Classification
Tidal Freshwater Marsh (Narrowleaf Pondlily Subtype)		Natural Community
Tidal Freshwater Marsh (Shoreline Lawn Subtype)		Natural Community
Coastal Fringe Shell Woodland		Natural Community
Tidal Swamp (Mixed Subtype)		Natural Community
Tidal Freshwater Marsh (Oligohaline Low Marsh Subtype)		Natural Community
Tidal Red Cedar Forest		Natural Community
Tidal Freshwater Marsh (Threesquare Subtype)		Natural Community
Tidal Freshwater Marsh (Needlerush Subtype)		Natural Community
Lepidochelys kempii	Kemp's Ridley Seaturtle	Reptile
Dermochelys coriacea	Leatherback Seaturtle	Reptile
Minuartia godfreyi	Godfrey's Sandwort	Vascular Plant
Ptilimnium ahlesii	Carolina Bishopweed	Vascular Plant
Oenothera riparia	Riverbank Evening-primrose	Vascular Plant
Amaranthus pumilus	Seabeach Amaranth	Vascular Plant
Trichostema sp. 1	Dune Bluecurls	Vascular Plant

Between 2012 and 2014 NOAA developed an Environmental Sensitivity Index map of all the areas along the N.C. coastline that would potentially be affected by an oil spill off our coast. The North Carolina Natural Heritage Program affirms that this map represents an accurate assessment of potential threats. It remains a reasonable assessment of coastal resources that are at risk if an oil spill occurs and identifies the most vulnerable shoreline types, some of which are located on the North Carolina coast. NOAA developed this map with the purpose of helping "planners . . . to identify vulnerable locations, establish protection priorities, and identify clean up strategies."[76] This map is designed to help planners identify potential impacts from an oil spill off North Carolina's coast.[77]

[76] NOAA, Office of Response and Restoration, Environmental Sensitivity Index (ESI) Maps, https://response.restoration.noaa.gov/maps-and-spatial-data/environmental-sensitivity-index-esi-maps.html (last visited March 7, 2018).

[77] Detailed information about the overall project can be found at: https://response.restoration.noaa.gov/maps-and-spatial-data/environmental-sensitivity-index-esi-maps.html

TABLE 6**.** Conservation Areas within N.C. DNCR

Conservation Areas within N.C. DNCR	**Acres**
Bald Head Island State Natural Area	5,964
Brunswick Town State Historic Site	129
Carolina Beach State Park	628
Currituck Beach Lighthouse Keepers Residence State Historic Site	3
Fort Fisher State Historic Site	38
Fort Fisher State Recreation Area	475
Fort Macon State Park	537
Goose Creek State Park	1,694
Hammocks Beach State Park	1,769
Historic Bath State Historic Site	9
Historic Edenton State Historic Site	2
Island Farm State Historic Site	4
Jockey's Ridge State Park	437
Lea Island State Natural Area	27
Masonboro Island State Natural Area	181
NC Aquarium at Pine Knoll Shores	27
NC Aquarium at Roanoke Island	9
Newbold-White House State Historic Site	50
Pettigrew State Park	21,762
Roanoke Island Festival Park	200
Run Hill State Natural Area	120
Salter Path Dunes Natural Area	23
Theodore Roosevelt State Natural Area	281
Tryon Palace State Historic Site	21
USS North Carolina Battleship Memorial	79
Waterside Theatre	10
Total NC DNCR Vulnerable Conservation Areas	**34,478 acres**

TABLE 7. N.C. Dedicated Nature Preserves

N.C. Dedicated Nature Preserve Name	**Acres**
4-H Environmental Education Dedicated Nature Preserve	135
Alligator River Game Land Dedicated Nature Preserve	14,221
Bald Head Island State Natural Area Dedicated Nature Preserve	359
Bald Head Woods Coastal Reserve Dedicated Nature Preserve	189
Bertie County Game Land Dedicated Nature Preserve	1,991
Bird Island Coastal Reserve Dedicated Nature Preserve	1,438
Bull Neck Swamp Dedicated Nature Preserve	2,321
Buxton Woods Coastal Reserve Dedicated Nature Preserve	1,007

Cape Fear River Wetlands Game Land Dedicated Nature Preserve	7,169
Columbus County Game Land Dedicated Nature Preserve	8,409
Croatan Game Land Dedicated Nature Preserve	586
Currituck Banks Component of the N.C. National Estuarine Research Reserve Dedicated Nature Preserve	964
Currituck Outer Banks Preserve Dedicated Nature Preserve	70
Devils Gut Preserve Dedicated Nature Preserve	1,021
Eagles Island Natural Area Dedicated Nature Preserve	239
Eagles Island Natural Area Dedicated Nature Preserve	151
Emily and Richardson Preyer Buckridge Coastal Reserve Dedicated Nature Preserve	27,111
Fort Macon State Park Dedicated Nature Preserve	364
Goose Creek Game Land Dedicated Nature Preserve	78
Gull Island Wildlife Conservation Area Dedicated Nature Preserve	69
Gull Rock Game Land Dedicated Nature Preserve	5,738
Hammocks Beach State Park Dedicated Nature Preserve	1,001
Jockeys Ridge State Park Dedicated Nature Preserve	369
Kitty Hawk Woods Coastal Reserve Dedicated Nature Preserve	1,840
Kitty Hawk Woods Preserve Dedicated Nature Preserve	461
Masonboro Island Component of the N.C. National Estuarine Research Reserve DNP	4,293
Nags Head Woods Preserve Dedicated Nature Preserve	413
Neuse River Game Land Dedicated Nature Preserve	3,257
North River Game Land Dedicated Nature Preserve	8,978
Northwest River Marsh Game Land Dedicated Nature Preserve	1,440
Pettiford Creek State Forest Dedicated Nature Preserve	251
Pettigrew State Park (Scuppernong River Section) Dedicated Nature Preserve	3,759
Rachel Carson Component of the N.C. National Estuarine Research Reserve DNP	2,315
Roanoke Island Festival Park Dedicated Nature Preserve	154
Roanoke Island Marshes Game Land Dedicated Nature Preserve	1,818
Run Hill State Natural Area Dedicated Nature Preserve	121
Theodore Roosevelt State Natural Area Dedicated Nature Preserve	273
Zekes Island Component of the N.C. National Estuarine Research Reserve DNP	1,472
Total N.C. Dedicated Nature Preserves Vulnerable to Oil Spill Impacts	**105,844**

DNCR includes 279,745 acres of Registered Heritage Areas, which are managed by federal agencies in coordination with the Natural Heritage Program. North Carolina Registered Heritage Areas are listed in Table 8 and include renown areas such as Cape Hatteras National Seashore, Shackleford Banks at Cape Lookout National Seashore, and Cedar Island National Wildlife Refuge.

TABLE 8. N.C. Registered Heritage Areas

N.C. Registered Heritage Area Name	Acres
Alligator River National Wildlife Refuge Registered Heritage Area	131,628
Alligator River Swamp Forest Registered Heritage Area	10,318
Bald Head/Battery Island Registered Heritage Area	92
Beacon/North Rock/Shell Castle Islands Registered Heritage Area	23
Bodie Island Lighthouse Pond Registered Heritage Area	255
Bodie Island Roadside Ponds and Marshes Registered Heritage Area	2,321
Bogue Inlet Outcrop Registered Heritage Area	72
Brant Island Registered Heritage Area	198
Broad Creek Marshes and Swamp Registered Heritage Area	83
Brunswick Electric Membership Corporation Registered Heritage Area	23
Buxton Woods Registered Heritage Area	2,580
Cape Hatteras Point Registered Heritage Area	459
Cape Lookout National Seashore/Core Banks Registered Heritage Area	23,711
Cape Lookout National Seashore/Shackleford Banks Registered Heritage Area	5,466
Carolina Beach State Park Registered Heritage Area	354
Cedar Island National Wildlife Refuge Registered Heritage Area	6,072
Cedar Point/White Oak River Marshes Registered Heritage Area	262
Clarks Landing Coastal Goldenrod Site Registered Heritage Area	199
Colington Island Meter Point Registered Heritage Area	37
Conaby Swamp Registered Heritage Area	95
Cool Springs Registered Heritage Area	154
Faircloth Road Pond Pine Pocosin Registered Heritage Area	2,319
Figure Eight Island Marsh Registered Heritage Area	808
Flanner Beach Natural Area Registered Heritage Area	216
Fort Fisher Coquina Outcrop Registered Heritage Area	47
Fort Raleigh Maritime Forest Registered Heritage Area	159
Goose Creek State Park Registered Heritage Area	377
Gum Swamp Bottomland Hardwood Forest Registered Heritage Area	35
Hadnot Creek Ponds and Longleaf Pine Woods Registered Heritage Area	422
Hatteras Inlet Islands Registered Heritage Area	49
Hatteras Island Little Kinnakeet Registered Heritage Area	703
Hatteras Sand Flats Registered Heritage Area	294
Hibbs Road Pine Ridges Registered Heritage Area	1,825
Hills Creek/Camp Hardee Woods Registered Heritage Area	97
Holston Creek/Haywood Landing Forests Registered Heritage Area	108
Hunters Creek Upland Forest Registered Heritage Area	72
Island Creek Natural Area Registered Heritage Area	142
Lake Ellis Simon Registered Heritage Area	1,878
Lower Cape Fear River Islands Registered Heritage Area	17
Masonboro Outcrop Registered Heritage Area	72

N.C. Registered Heritage Area Name	Acres
Mattamuskeet National Wildlife Refuge Registered Heritage Area	43,428
Military Ocean Terminal Sunny Point Registered Heritage Area	2,467
Millis Swamp Road Pinewoods Registered Heritage Area	172
Nags Head Woods (Town of Nags Head) Registered Heritage Area	283
New Dump Island Registered Heritage Area	11
New River Inlet Island Registered Heritage Area	32
New River Inlet Outcrop Registered Heritage Area	1,298
Nine Foot Road/Broad Creek Pinewoods Registered Heritage Area	470
North River Marshlands Registered Heritage Area	37
Ocracoke Island (Central Section) Registered Heritage Area	1,533
Ocracoke Island (Eastern End) Registered Heritage Area	1,329
Ocracoke Island (Western End Sand Flats) Registered Heritage Area	1,278
Oregon Inlet/Roanoke Sound Islands Registered Heritage Area	187
Patsy Pond Limesink Complex Registered Heritage Area	450
Pea Island National Wildlife Refuge Registered Heritage Area	2,786
Pungo Lake Registered Heritage Area	4,269
Ron Cully Memorial Natural Area Registered Heritage Area	633
Salter Path Dunes Registered Heritage Area	39
Salvo Maritime Shrub Swamp and Marshes Registered Heritage Area	217
Sand Bag Island Registered Heritage Area	8
Swanquarter National Wildlife Refuge Registered Heritage Area	16,656
Topsail Outcrop Registered Heritage Area	72
Town Creek Marshes and Swamps Registered Heritage Area	759
Turtle Pond and (Cape Hatteras) Lighthouse Pond Registered Heritage Area	36
US 264 Low Pocosin (DCAFR) Registered Heritage Area	6,050
Walkers Millpond/Black Creek Registered Heritage Area	1,011
Wright Brothers Dunes Registered Heritage Area	193
Total N.C. Registered Heritage Areas Vulnerable to Oil Spill Impacts	**279,745**

North Carolina Historic Resources on the Coast and in Coastal Waters Would Be Threatened by Offshore Oil and Gas Development

Activities related to offshore oil and gas drilling have a high probability of affecting both submerged, near shore, and onshore historic resources, which are managed by the North Carolina Department of Natural and Cultural Resources.

North Carolina has earned the nickname "Graveyard of the Atlantic" for the thousands of ships lost off the Outer Banks, from Native American dugouts to colonial-era ships to Civil War-ironclads and WWII U-boats. Other submerged historic resources include downed military aircraft. Many of these sites have the potential to contain human remains and may legally be considered graves subject to state, federal, and international law.

According to records of the North Carolina Office of State Archaeology and the National Atmospheric Administration's (NOAA) Wrecks and Obstructions Database, excluding inland counties, there are a total of 5,545 reported shipwrecks in North Carolina and off shore. Of these, 910 have been confirmed and documented—approximately one in six. For a table of individual shipwrecks and submerged sites in North Carolina and Federal Waters, see Attachment A. Attachments B and C provide maps of shipwreck locations by individual locations and clusters, respectively.

While some of these resources have known locations for avoidance and planning purposes, other archaeologically sensitive locations are unknown or unexpected. For example, in February 2018, the state of Florida announced the discovery of Native American human burials found off the Florida coast.[78] Like Florida's coastline, North Carolina's coastline once extended far east of its current location, and discovery of archaeological evidence of ancient human occupation on now submerged lands off the North Carolina coast is not out of the question.

Offshore oil and gas extraction and development activities are likely to adversely impact North Carolina's historic resources. These activities typically require construction and excavation for pipelines and/or use of ships to transport extracted energy resources. Pipeline excavation entails disturbance of the seabed and increased ship traffic poses the likely need for dredging activities. Both pipeline excavation and dredging are likely to affect submerged historic resources within both state and federal waters. Additionally, pipeline connections onto shore for resource transportation by land and construction of additional port infrastructure have the potential to affect archaeologically sensitive areas or nearby historic districts.

An oil spill from offshore extraction platforms likely would have direct negative effects on maritime or near shore archaeological sites (shell middens, wharves, shipwrecks, and prehistoric and historic cemeteries) as well as on coastal communities with historic resources (historic districts). These impacts can include physical damage and degradation as well as impairments to heritage tourism and economic productivity in these areas.

The federal Advisory Council on Historic Preservation, based on its experience with the *Deepwater Horizon* oil spill in the Gulf of Mexico in 2010, sets forth the type of damage that could be expected to historic resources impacted by an oil spill:

> The spill may result in the physical destruction, damage, or alteration of all or part of a historic property; isolation of a historic property from or alteration of the character of the property's setting when that character contributes to the property's qualification for the National Register [of Historic Places]; and introduction of visual, audible, or atmospheric conditions that are out of character with a property or alter its setting. The spill may also result in direct physical contact of historic properties with released or spilled substances that may cause an inability to radiocarbon date the contaminated resources and the acceleration of deterioration of historically significant materials. These impacts present

[78] http://dos.myflorida.com/historical/meetings-and-events/news-and-press-releases/view-release/?id=54968

obstacles in the identification of historic properties in the field. As a result, important scientific, historic, and cultural information may be lost.[79]

Because of the *Deepwater Horizon* oil spill, the extensive shell middens, military forts, and historic fishing camps of the Gulf Coast found themselves "mired in toxic gunk" from Louisiana to Florida as a result of water borne oil washing up from the Deepwater Horizon oil spill. Shells in the pre-historic middens absorb the oil and alter the accuracy of radiocarbon dating, and the degradation of such sites may require archaeologists to wear hazmat suits and ventilators for excavation.[80]

Additionally, exposure to oil and chemical dispersants for cleanup has the potential to alter the microbiology of historic shipwrecks and submerged resources, and alter irreversibly the natural wood degradation and metal corrosion processes, their long-term preservation, and the role of shipwrecks as deepwater eco-systems.[81]

Like with the historic fishing camps and forts of the Gulf Coast, North Carolina has numerous historic sites within 50 feet of the waterline in both private and public ownership that would be directly impacted by oil overwash and contamination, including Fort Fisher, Fort Macon, Brunswick Town/Fort Anderson, and Orton Plantation and its restored rice fields, as well as National Register historic districts in coastal communities like Southport, Caswell Island, Oak Island, Wilmington, Beaufort, Bath, Ocracoke, Cape Hatteras, Portsmouth, Cape Lookout, Fort Raleigh, Currituck , and in countless inland sound communities, including but not limited to Edenton, Elizabeth City, New Bern, and Washington. Attachments A, B, and C provide a list and maps of historic above-ground on-shore resources, within 50 feet of the waterline, with official federal or state designations.

Likewise, cleanup activities such as excavation of contaminated soil, creation of staging areas, use of untrained volunteers, and use of heavy equipment traffic, pose the potential for damage to or denigration of historic buildings and sensitive archaeological resources, including but not limited to coastal cemeteries and burial sites. In Alaska, after the 1989 Exxon Valdez oil spill, studies suggested sites were further damaged by vandalism after the spill.[82]

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[79] Advisory Council on Historic Preservation. "QUESTIONS & ANSWERS: Consideration and Treatment of Historic Properties During the Response to the Deepwater Horizon Oil Spill." June 2010, available at http://www.achp.gov/docs/OilQandA.pdf.

[80] Borrell, Brendan. "Oil Spill Threatens History." *Archaeology*, Volume 63, Number 5, September / October 2010. Available at: https://archive.archaeology.org/1009/trenches/oilspill.html.

[81] Bureau of Ocean Energy Management. "Fact Sheet: Research Related to the Deepwater Horizon Oil Spill." Available at https://www.boem.gov/Research-Related-to-the-Deepwater-Horizon-Factsheet/.

[82] See Bittner, Judith, Cultural Resources and the Exxon Valdez Oil Spill: An Overview, In Proceedings of the Exxon Valdez Oil Spill Symposium. American Fisheries Society, Bethesda, Maryland, 1996, pp. 814-818, http://dnr.alaska.gov/Assets/uploads/DNRPublic/parks/oha/oilspill/bittner1996.pdf; Oregon State Historic Preservation Office. "Consideration of Cultural Resources in Freshwater Oil Spills." Available at https://archive.epa.gov/emergencies/content/fss/web/pdf/white.pdf.

North Carolina's Protected State and National Reserves Would Be Threatened by Offshore Oil and Gas Development

DEQ's Division of Coastal Management administers the North Carolina Coastal Reserve and National Estuarine Research Reserve, which protect environmentally representative coastal and estuarine lands and waters at ten reserves. Oil and gas development off North Carolina's coast would put these reserves at risk. The reserves are managed for the following purposes as authorized by the federal Coastal Zone Management Act and the state Coastal Area Management Act:

- Research: Conduct relevant research to inform sound management of coastal resources;
- Education: Increase understanding of coastal ecosystems, their importance, and the effects humans have on them; and
- Public Use: Accommodate compatible, traditional and recreational uses.

The reserves' natural resources that would be at risk encompass 42,245 acres as described in Table 9. Nine of the 10 reserves are also Dedicated Nature Preserves and many of the reserves are adjacent to or in the general vicinity of State Parks resources. Four of the ten reserves comprise the North Carolina National Estuarine Research Reserve, one of 29 reserves around the country within the National Estuarine Research Reserve System. This program is implemented through a state-National Oceanic and Atmospheric Administration partnership, and the reserves are considered NOAA-trust resources. The reserves protect sensitive habitats such as salt marsh, maritime forest, and barrier island ecosystems that are utilized by U.S. and N.C. threatened species (e.g., loggerhead seaturle and piping plover) and species of concern (e.g., diamondback terrapin and crystal skipper).

Thousands of school-aged children and members of the public visit the reserves annually through the program's educational offerings and to enjoy the protected natural resources. Long-term monitoring of the reserves provides assessment of short- and long-term trends in environmental condition. The reserves provide relatively pristine areas for researchers to investigate coastal-management questions and best management practices, resulting in hundreds of projects conducted at the reserves. These purposes and uses would be threatened by offshore oil and gas development.

TABLE 9. Acreage of North Carolina Coastal Reserve and National Estuarine Research Reserve sites in vulnerable coastal regions.

Name	**Acres**
Bald Head Woods Coastal Reserve	191
Bird Island Coastal Reserve	1,481
Buxton Woods Coastal Reserve	1,007
Currituck Banks Component of the N.C. National Estuarine Research Reserve	965
Emily and Richardson Preyer Buckridge Coastal Reserve	27,111
Kitty Hawk Woods Coastal Reserve	1824
Masonboro Island Component of the N.C. National Estuarine Research Reserve	5,653

Permuda Island Coastal Reserve	63
Rachel Carson Component of the N.C. National Estuarine Research Reserve	2,315
Zeke's Island Component of the N.C. National Estuarine Research Reserve	1,635
Total	**42,245**

RELEVANT NORTH CAROLINA LAWS, POLICIES and GOALS

North Carolina Laws, Policies, and Goals, Apply to Offshore Oil and Gas Exploration and Development

N.C. Governor Roy Cooper identifies the laws, goals, and policies of North Carolina that are discussed in this section and anywhere else in this submittal as relevant matters for the Interior Secretary's consideration, per Section 18 of the OCSLA.[83]

Article 14, Section 5 of the North Carolina Constitution provides that "[i]t shall be the policy of this State to conserve and protect its lands and waters for the benefit of all its citizenry, and to this end it shall be a proper function of the State of North Carolina … to control and limit the pollution of our air and water, … and in every other appropriate way to preserve as a part of the common heritage of this State its forests, wetlands, estuaries, beaches, historical sites, openlands, and places of beauty."[84]

By statute, the North Carolina Department of Environmental Quality (DEQ) is directed to "provide for the protection of the environment and public health."[85] The coastal resources of North Carolina are managed under the state's federally-approved coastal management program. North Carolina has participated in the Coastal Zone Management Act program since 1974. North Carolina's coastal zone management program consists of, but is not limited to, the Coastal Area Management Act (CAMA, Article 7 of Chapter 113A of the North Carolina General Statutes), Chapter 7 of Title 15A of North Carolina's Administrative Code, the state's Dredge and Fill Law (N.C.G.S. §113-229), and the land use plans of coastal counties and municipalities. It is the objective of the North Carolina Division of Coastal Management to manage the state's coastal resources to ensure that proposed federal activities are compatible with safeguarding and perpetuating the biological, social, economic, and aesthetic values of the state's coastal waters.

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[83] 43 U.S.C. 1344 (a)(2)(F).

[84] NC. Const. art. XIV, § 5. Our office has previously submitted letters to the Secretary of Interior on January 10, January 17, January 22, 2018. We ask that you consider those letters, which are enclosed as Attachment E, as part of this comment.

[85] N.C.G.S. §143B-279.2. This statute also charges DEQ to "administer the State Outer Continental Shelf (OCS) Task Force and coordinate State participation activities in the federal outer continental shelf resource recovery programs as provided under the OCS Lands Act Amendments of 1978 (43 USC §§ 1801 et seq.) and the OCS Lands Act Amendments of 1986 (43 USC §§ 1331 et seq.)."

The North Carolina Coastal Resources Commission first adopted coastal energy policies in 1979, and has subsequently amended those policies in order to keep pace with industry advancements. In 2010, the North Carolina General Assembly amended CAMA to incorporate elements of these policies into law. On September 6, 2016, the National Oceanic and Atmospheric Administration Office for Coastal Management approved these coastal energy policies as enforceable policies under the state's Coastal Management Program, thereby allowing these rules to be applied to Federal Consistency determinations for offshore energy activities. These coastal energy policies list the types of near-shore and offshore sensitive areas to avoid, require mitigation where impacts to coastal resources cannot be avoided, and restoration of sites when facilities are abandoned.

Oil and gas exploration and development would be subject to the North Carolina Oil Pollution and Hazardous Substance Control Act (N.C.G.S. §143-215.75), which promotes the health, safety, and welfare of the residents of North Carolina by protecting the land and the waters over which the state has jurisdiction from pollution by oil, oil products, oil by-products, and other hazardous substances. Furthermore, offshore oil and gas drilling and development activities would be subject to the North Carolina Environmental Policy Act (Article 1 of Chapter l 13A of the General Statutes) and the Mining Act of 1971 (Article 7 of Chapter 74 of the General Statutes).

BOEM provides that the primary direct impact pathway from oil and gas drilling, development, production, and use activities to human health is degradation of air quality through emissions.[86] DEQ is required to protect North Carolina's air quality pursuant to Article 21 of Chapter 143 of the General Statutes and stands ready to regulate any oil and gas activities that threaten our state's ambient air and the public's health. Human health impacts are not limited to air emissions and can result from exposures during cleanup and mitigation activities in the event of a release. In a study published in the journal *Environmental Health Perspectives*, researchers identified a significant association between respiratory, dermal, and eye irritation symptoms in responders and the use of and exposure to oil dispersants during clean up during *Deepwater Horizon.*[87]

Any oil and gas development or ancillary activities that occur within North Carolina's jurisdictional waters or that are landed on our coast will be subject to the following programs and policies, in addition to the aforementioned laws and regulations:

- Those laws and policies of the Marine Fisheries Commission and implemented by DEQ's Division of Marine Fisheries pursuant to Chapter 113 of the General Statutes and the rules promulgated thereunder.
- Those laws, policies, and authority ascribed to the North Carolina Utilities Commission pursuant to Chapter 62 of the General Statutes.
- Those laws, policies, and regulations as they apply to land disturbance and development and implemented by DEQ by the Division of Mining, Energy, and Land Resources pursuant to the

[86] Bureau of Ocean Energy Management. 2018. 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp. 8-11

[87] McGowan, et. al. Respiratory, Dermal, and Eye Irritation Symptoms Associated with Corexit EX9527A/EC9500A following the Deepwater Horizon Oil Spill: Findings from the GuLF STUDY. Environmental Health Perspectives, 125(9):097015

Sedimentation Pollution Control Act of 1973 (Article 4 of Chapter 143A) and storm water management and control laws under Article 21 of Chapter 143 of the General Statutes, and all rules promulgated thereunder by the Sedimentation Control Commission and the Environmental Management Commission (EMC), respectively.

- Those laws, policies, and authority of the DEQ Division of Waste Management as they apply to promoting and preserving an environment that is conducive to public health and welfare, and preventing the creation of nuisances and the depletion of our natural resources, pursuant to Article 9 of Chapter 130A of the General Statutes, and all rules promulgated thereunder by the EMC.
- Those laws, policies, and authority of the DEQ Division of Mitigation Services as they apply to the acquisition, maintenance, restoration, enhancement, and creation of wetland and riparian resources that contribute to the protection and improvement of water quality, flood prevention, fisheries, wildlife habitat, and recreational opportunities, pursuant to N.C.G.S. §143-214.8 et. seq., and all rules promulgated thereunder by the EMC.

The DPP summarized the N.C. Energy Policy Council Chair's response to BOEM's Request for Information and Comment in the summer of 2017. The Chair offered support for including OCS waters off the coast of North Carolina for oil and gas exploration and leasing[88] and referred to his role as chair of the EPC as a demonstration of North Carolina's support for his position. The EPC is an advisory body directed to develop and provide recommendations to the Governor and the North Carolina General Assembly and does not represent the policy of the State of North Carolina.[89]

DNCR's vision is to be the leader in using the state's natural and cultural resources to build the social, cultural, educational and economic future of North Carolina. Its mission is to improve quality of life by creating opportunities to experience excellence in the arts, history, libraries and nature and to stimulate learning, inspire creativity, preserve the state's history, conserve the state's natural heritage, encourage recreation and cultural tourism, and promote economic development.

In addition to the federal Submerged Lands Act of 1953, which grants state control over offshore areas within three nautical miles of the state's coastline, DNCR has identified the following relevant state laws, in addition to any mentioned elsewhere in these comments:

- North Carolina Archaeological Resources Protection Act (N.C.G.S. 70-10 through 70-25). Modeled after the federal Archaeological Resources Protection Act of 1979, this statute applies to all state-owned, occupied, or controlled property except for highway rights of way, and would apply to submerged lands within state waters. Permits are required for archaeological investigations on state lands, and no person may excavate, remove, damage or otherwise alter or deface any archaeological resource located on state lands without a permit.

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[88] Bureau of Ocean Energy Management. 2018. 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. pp. A-22

[89] Article 1 of Chapter 113B of the General Statutes

- North Carolina Unmarked Human Burial and Human Skeletal Remains Protection Act (N N.C.G.S. 70-26 through 70-40). This act applies to all lands within the state of North Carolina except for that under federal ownership or control. It is conceivable that shipwrecks or other submerged historic resources in state waters may contain unmarked human skeletal remains.
- N.C.G.S. 121-12(a). This provision applies to official state consideration of adverse effects on historic resources (submerged or above ground/water) listed in the National Register of Historic Places, and would apply equally to shipwrecks or other submerged historic resources as well as on-shore historic places.
- North Carolina Salvage of Abandoned Shipwrecks and Other Underwater Archaeological Sites (N.C.G.S. 121-22 through 121-33). This act establishes title for the State of North Carolina to all shipwrecks, vessels, cargoes, tackle and underwater archaeological artifacts abandoned for more than ten years and lying on the bottoms of navigable waters and ocean waters from within one marine league seaward from the Atlantic seashore extreme low watermark. Permits are required for the exploration, recovery or salvage of state-owned abandoned shipwrecks and underwater archaeological artifacts.

CONCLUSION

The potential adverse environmental, economic, military, and cultural impacts of oil and gas exploration off North Carolina's coast far outweigh the potential benefits. The estimates for oil and gas reserves are relatively small, and the geology underlying our offshore waters is not conducive to development. The distance to existing oil and gas infrastructure negates many of the typical benefits of oil development, not to mention the lack of federal revenue sharing by states for activities in the Atlantic OCS. The energy demands of North Carolina and the region do not require oil and gas sourced from the Atlantic or Mid-Atlantic area, and even normal development of offshore oil and gas resources would threaten military readiness and the significant economic presence of military installations in North Carolina.

North Carolina's coastal economy depends upon tourism and fishing, and damages to those industries would be felt throughout the state. The ecology of the North Carolina coastal zone as well as the Mid-Atlantic OCS area is unique and highly susceptible to damage due to oil and gas development and production, including deleterious impacts to fisheries in federally recognized areas of significant productivity, marine mammals, and endangered and threatened species. North Carolina has numerous state parks, recreational areas, and cultural and historic sites, as well as endangered, threatened, or otherwise vulnerable species. Our state economy, natural heritage, and culture rely heavily on the health and beauty of the natural resources of the coastal zone.

Oil and gas drilling and development would unnecessarily risk harm and irreversible impairment of these important state and national interests. Therefore, it is imperative to exclude the areas off the shore of the State of North Carolina, including but not limited to the Mid-Atlantic region, from any further consideration in the 2019–2024 National OCS Oil and Gas Leasing Program.

Thank you for your attention and consideration of North Carolina's comments on the DPP. Please contact the North Carolina Governor's Office through Jeremy Tarr, Policy Advisor, at (919) 814-

2043 or Jeremy.Tarr@NC.Gov if you need any additional information or wish to discuss this matter further.

Shipwrecks and Submerged Sites in North Carolina and Federal Waters

Status	UAB Code	Resource Name	County	Period	Type	State Site Number
DE	0012BOB	USS Huron	Dare	Historic	Vessel	31DR83
NR	0003BUI	Queen Anne's Revenge	Carteret	Historic	Vessel	31CR314
NR	0007NEI	Arabian	New Hanover	Historic	Vessel	31NH840
NR	0006NEI	Condor	New Hanover	Historic	Vessel	31NH839
NR	0009NEI	Flambeau (Nearshore)	New Hanover	Historic	Vessel	31NH842
NR	0001NEI	Modern Greece	New Hanover	Historic	Vessel	31NH838
NR	0008NEI	USS Louisiana(Twilight?)	New Hanover	Historic	Vessel	31NH841
NR	0002NEI	USS Peterhoff	New Hanover	Historic	Vessel	31NH723
NR	0011NEI	Stormy Petrel	New Hanover	Historic	Vessel	NH843
	0012PMR	Blounts Crk Rudder Site	Beaufort			
	0013PMR	Cotton Patch Barge	Beaufort			
	0001PMR	Washington Steamer	Beaufort			
	0063PMR	ECU Field 2006 field school Site B	Beaufort		Vessel	
	0062PUR	Abandoned Vessel #3 (Schoolhouse landing)	Beaufort	Historic	Vessel	
	0015PMR	Castle Island 10 (ECU report #14)	Beaufort	Historic	Vessel	
	0014PMR	Castle Island 2 (ECU report #14)	Beaufort	Historic	Vessel	
	0011TRR	Composite Wreck	Beaufort	Historic	Vessel	
	0017PMR	Cypress Landing scow schooner	Beaufort	Historic	Vessel	
	0061PUR	High Roller	Beaufort	Historic	Vessel	
	0060PUR	Miss Amber	Beaufort	Historic	Vessel	
	0059PUR	Miss Betty J	Beaufort	Historic	Vessel	
	0058PUR	Miss Shirley	Beaufort	Historic	Vessel	
	0002TRR	USS Pickett	Beaufort	Historic	Vessel	
	0047PMR	Log Raft Site	Beaufort	Historic	AnomalyOnly	
	0006BAR	Beasley Pt. Shell Midden	Beaufort	Historic	Interface	
	0001BAR	Bonner Point Warehouse	Beaufort	Historic	Interface	
	0004BAR	Iron Rail Landing	Beaufort	Historic	Interface	
	0043PMR	Sunk Dock Sailboat Site	Beaufort	Historic	Other	
	0026PMR	Ann Bryan	Beaufort	Historic	Vessel	
	0023PUR	Cheryl Ann	Beaufort	Historic	Vessel	
	0009PMR	Dixon Creek Wreck	Beaufort	Historic	Vessel	
	0007PMR	Eastham Creek Pt. Wreck	Beaufort	Historic	Vessel	
	0028PMR	Eber Herbert	Beaufort	Historic	Vessel	

*Records include submerged wrecks and sites from UAB data only (Underwater Archaeology Branch, NC Office of State Archaeology). NOAA wrecks are excluded from this list as information about the resource is sparse.

Status	UAB Code	Resource Name	County	Period	Type	State Site Number
	0062PMR	ECU Field 2006 field school Site A	Beaufort	Historic	Vessel	
	0007PUR	Fish Net Wreck 1	Beaufort	Historic	Vessel	
	0050PUR	Inboard Workboat	Beaufort	Historic	Vessel	
	0015PUR	Iron Barge	Beaufort	Historic	Vessel	
	0029PMR	Kickin' Bitch	Beaufort	Historic	Vessel	
	0002PUR	Lower Dowry Creek Wreck	Beaufort	Historic	Vessel	
	0008PMR	Paton Pt. Wreck	Beaufort	Historic	Vessel	
	0049PUR	Six Cylinder Workboat	Beaufort	Historic	Vessel	
	0042PUR	Skiff Site 5	Beaufort	Historic	Vessel	
	0043PUR	Skiff Site 6	Beaufort	Historic	Vessel	
	0048PUR	Skiff Site 7	Beaufort	Historic	Vessel	
	0010PMR	South Upper Spring Crk Wrk	Beaufort	Historic	Vessel	
	0028PUR	Stave Bottom Boat	Beaufort	Historic	Vessel	
	0006PMR	Susie Dryden	Beaufort	Historic	Vessel	
	0016PMR	Whiting Tolar Wreck	Beaufort	Historic	Vessel	
	0024PUR	Wilkins Dock 1 (2 boats)	Beaufort	Historic	Vessel	
	0025ROR	Friedman's Barge	Bertie	Historic	Vessel	
	0013SAR	Batts Pt. Transhipment Pt	Bertie	Historic	Interface	
	0011SAR	Old House Bridge Landing	Bertie	Historic	Interface	
	0009SAR	Tombstone Landing	Bertie	Historic	Interface	
	0002SAR	Wileys Landing	Bertie	Historic	Interface	
	0003ABS	Roanoke River Lighthouse site	Bertie	Historic	Other	
	0001SAR	Avoca Flat Boat	Bertie	Historic	Vessel	
	0012SAR	Avoca Steam Flat	Bertie	Historic	Vessel	
	0005ROR	Fort Branch Barge	Bertie	Historic	Vessel	
	0001CWR	Keel Creek Wreck	Bertie	Historic	Vessel	
	0010SAR	Peddler Boat	Bertie	Historic	Vessel	
	0006ROR	Rhodes Indian Site	Bertie	Prehistoric	Other	
	0002OIB	Georgiana McCaw	Brunswick			
	0004LFI	Iron Box Site	Brunswick			
	0001LFI	Bendigo	Brunswick	Historic	Vessel	
	0108CFR	Frances Elizabeth	Brunswick	Historic	Vessel	
	0082CFR	Kate	Brunswick	Historic	Vessel	
	0001HBB	Ranger	Brunswick	Historic	Vessel	
	0003SSB	Tennessee?	Brunswick	Historic	Vessel	
	0002LFI	USS Iron Age	Brunswick	Historic	Vessel	

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Status	UAB Code	Resource Name	County	Period	Type	State Site Number
	0001SSB	Vesta	Brunswick	Historic	Vessel	
	0002SSB	Vesta Barge	Brunswick	Historic	Vessel	
	0085CFR	Battery Island Boiler	Brunswick	Historic		
	0054CFR	MOTSU Channel Anchor	Brunswick	Historic	IsolatedFind	
	0003CFI	Bald Head Rudder Wreck	Brunswick	Historic	Vessel	
	0081CFR	Belfast	Brunswick	Historic	Vessel	
	0086CFR	Brunswick Town Barge	Brunswick	Historic	Vessel	
	0083CFR	Campbell Island Wreck	Brunswick	Historic	Vessel	
	0052CFR	CSS North Carolina	Brunswick	Historic	Vessel	
	0003LFI	Elizabeth	Brunswick	Historic	Vessel	
	0001CFI	Ella	Brunswick	Historic	Vessel	
	0084CFR	Fort Caswell Steamer	Brunswick	Historic	Vessel	
	0004BWR	Landing Craft - LCM	Brunswick	Historic	Vessel	
	0038CFR	NOAA #4 Barge	Brunswick	Historic	Vessel	
	0009BWR	Sand Mine Barge	Brunswick	Historic	Vessel	
	0004CFI	Sandpiper Shipwreck	Brunswick	Historic	Vessel	
	0001SHI	Shallotte Inlet Wreck	Brunswick	Historic	Vessel	
	0079CFR	Battery Island Canoe	Brunswick	Prehistoric	Vessel	
	0035PQR	Cannon Carriage Site	Camden	Historic	IsolatedFind	31PK96
	0033PQR	Hospital Point "A" (Gun carriage)	Camden	Historic	IsolatedFind	31CM68
	0034PQR	Hospital Point "B" (Black Warrior)	Camden	Historic	Vessel	31CM67
	0038PQR	Pecan Farm Barge	Camden	Historic	Vessel	
	0002PQR	E.C. Canal Barge #1	Camden	Historic	Vessel	
	0003PQR	E.C. Canal Barge #2	Camden	Historic	Vessel	
	0004PQR	E.C. Canal Barge #3	Camden	Historic	Vessel	
	0005PQR	E.C. Canal Barge #4	Camden	Historic	Vessel	
	0007PQR	E.C. Canal Barge #5	Camden	Historic	Vessel	
	0008PQR	E.C. Canal Barge #6	Camden	Historic	Vessel	
	0027PQR	E.C. Canal Barge #7	Camden	Historic	Vessel	
	0026PQR	E.C. Centerboard Wreck	Camden	Historic	Vessel	
	0006PQR	E.C. Launch	Camden	Historic	Vessel	
	0009PQR	E.C. Marina Wreck	Camden	Historic	Vessel	
	0024PQR	E.C. Powerboat #1	Camden	Historic	Vessel	
	0025PQR	E.C. Powerboat #2	Camden	Historic	Vessel	
	0010PQR	E.C. Square Barge #1	Camden	Historic	Vessel	
	0019PQR	E.C. Square Barge #10	Camden	Historic	Vessel	

*Records include submerged wrecks and sites from UAB data only (Underwater Archaeology Branch, NC Office of State Archaeology). NOAA wrecks are excluded from this list as information about the resource is sparse.

Status	UAB Code	Resource Name	County	Period	Type	State Site Number
	0011PQR	E.C. Square Barge #2	Camden	Historic	Vessel	
	0012PQR	E.C. Square Barge #3	Camden	Historic	Vessel	
	0013PQR	E.C. Square Barge #4	Camden	Historic	Vessel	
	0014PQR	E.C. Square Barge #5	Camden	Historic	Vessel	
	0015PQR	E.C. Square Barge #6	Camden	Historic	Vessel	
	0016PQR	E.C. Square Barge #7	Camden	Historic	Vessel	
	0022PQR	NC 2667 T	Camden	Historic	Vessel	
	0021PQR	Ruth	Camden	Historic	Vessel	
	0029PQR	Stevenson Barge	Camden	Historic	Vessel	
	0001PQR	Thompson Wreck	Camden	Historic	Vessel	
	0001PIB	John I. Snow	Carteret			
	0001CLX	Bouldin Site	Carteret	Historic	IsolatedFind	31CR324
	0014SCB	Gunflint Site	Carteret	Historic	IsolatedFind	
	0015SCB	Bronze Pin Site	Carteret	Historic	Vessel	
	0001SFB	Riebe 1 Ships Stove site	Carteret	Historic	Vessel	
	0009BUI	Combined with BUI0020 September site	Carteret	Historic		
	0017SCB	Clay Bottle site	Carteret	Historic	IsolatedFind	
	0011BUI	Intersal August	Carteret	Historic	IsolatedFind	
	0014BUI	Intersal Golf	Carteret	Historic	IsolatedFind	
	0013BUI	Intersal Hotel	Carteret	Historic	IsolatedFind	
	0016BUI	Intersal Juno	Carteret	Historic	IsolatedFind	
	0017BUI	Intersal Manuel	Carteret	Historic	IsolatedFind	
	0012BUI	Intersal Pink	Carteret	Historic	IsolatedFind	
	0010BUI	Intersal Roger	Carteret	Historic	IsolatedFind	
	0019BUI	Intersal Sugar	Carteret	Historic	IsolatedFind	
	0018BUI	Intersal Victor	Carteret	Historic	IsolatedFind	
	0015BUI	Intersal Xray	Carteret	Historic	IsolatedFind	
	0004BES	Wayne's Olive Jar Site	Carteret	Historic	IsolatedFind	31CR317
	0002BES	Boat Landing East Wreck	Carteret	Historic	Vessel	
	0001BES	Boat Landing West Wreck	Carteret	Historic	Vessel	
	0004BBB	Cupulo Site	Carteret	Historic	Vessel	
	0007BUI	Intersal "Bond" Site	Carteret	Historic	Vessel	31CR315
	0008BUI	Intersal "Kramer" Site	Carteret	Historic	Vessel	
	0006BUI	Intersal "Maria" Site	Carteret	Historic	Vessel	31CR312
	0001BUI	Intersal #1 (Quinnebaug)	Carteret	Historic	Vessel	
	0002BUI	Intersal #2	Carteret	Historic	Vessel	

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Status	UAB Code	Resource Name	County	Period	Type	State Site Number
	0004BUI	Intersal #4	Carteret	Historic	Vessel	
	0005BUI	Intersal #5	Carteret	Historic	Vessel	
	0020BUI	Intersal September	Carteret	Historic	Vessel	
	0001BBB	Iron Steamer (Pevensey?)	Carteret	Historic	Vessel	
	0002CLX	Luytjes Site (01SCB590)	Carteret	Historic	Vessel	
	0003CLX	Reibe Big Gun site	Carteret	Historic	Vessel	
	0002SFB	Riebe Rudder site	Carteret	Historic	Vessel	
	0021BUI	Steel wreck	Carteret	Historic	Vessel	
	0003BES	Trawler (3 Horses Wreck)	Carteret	Historic	Vessel	
	0003EDS	Grassy Point Railway	Chowan			
	0007EDS	Burroughs Site	Chowan	Historic	Vessel	
	0001EDS	Johns Island Wreck	Chowan	Historic	Vessel	
	0002EDS	Queen Annes Creek Wreck	Chowan	Historic	Vessel	
	0005EDS	Rum Bottle Site	Chowan	Historic		
	0006NUR	Firebrick Wreck	Craven			
	0004NUR	James City Outside Wreck	Craven		Vessel	
	0004TNR	Brewbaker Site	Craven	Historic	Vessel	
	0007TNR	Brice Creek Barge	Craven	Historic	Vessel	
	0043NUR	Bridgeton Barge#2	Craven	Historic	Vessel	
	0009TNR	Eureka Tug	Craven	Historic	Vessel	
	0001TNR	New Bern Centerboard Sch.	Craven	Historic	Vessel	
	0005TNR	Trent River Flat	Craven	Historic	Vessel	
	0021NUR	USS Underwriter	Craven	Historic	Vessel	31CV314
	0016NUR	Bremer Civil War Fort Site	Craven	Historic		
	0006TNR	Brice Creek Metal Wreck	Craven	Historic	Vessel	
	0017NUR	Duck Creek Wreck	Craven	Historic	Vessel	
	0005NUR	James City Inside Wreck	Craven	Historic	Vessel	
	0003TNR	New Bern Bayline	Craven	Historic	Vessel	
	0002TNR	New Bern Cris Craft	Craven	Historic	Vessel	
	0008TNR	Union Point Wreck	Craven	Historic	Vessel	
	0021CKB	Metropolis	Currituck	Historic	AnomalyOnly	
	0003CKS	Cason Point Landing	Currituck	Historic	Interface	
	0012CKB	13.4 Mile N. Poyner Hill Wreck	Currituck	Historic	Vessel	
	0002CKS	Anonyma	Currituck	Historic	Vessel	
	0001NLR	Carter Canoe	Currituck	Historic	Vessel	
	0006CKS	Clyde "Booty" Spruill "Narrows" site	Currituck	Historic	Vessel	

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Status	UAB Code	Resource Name	County	Period	Type	State Site Number
	0001COS	Coinjock Canoe	Currituck	Historic	Vessel	31CK131
	0002CKB	Currituck Frame	Currituck	Historic	Vessel	
	0014CKB	Currituck Light Wreck	Currituck	Historic	Vessel	
	0001CKS	Hambone Site	Currituck	Historic	Vessel	31CK130
	0005CKS	Jimmy Markart wreck #1	Currituck	Historic	Vessel	
	0007CKS	Piney Island Shipwreck (Markart #2)	Currituck	Historic	Vessel	
	0003CKB	Plywood Boat	Currituck	Historic	Vessel	
	0004CKS	Undine	Currituck	Historic	Vessel	
	0008CKS	Wright Memorial Bridge Site	Currituck	Historic	Vessel	
	0002CTS	Ashebee Harbor Dock	Dare	Historic	Interface	
	0004CTS	Croatan Schooner#1	Dare	Historic	Vessel	
	0005CTS	Croatan Schooner#2	Dare	Historic	Vessel	
	0006CTS	Croatan Schooner#3	Dare	Historic	Vessel	
	0007CTS	Croatan Schooner#4	Dare	Historic	Vessel	
	0007SHB	Ramp 55 wreck	Dare	Historic	Vessel	
	0022NHB	.3 mile North Kohler	Dare	Historic		
	0024NHB	0.2 miles S. ramp 23 Salvo	Dare	Historic		
	0021NHB	Eckard Site	Dare	Historic		
	0011NHB	Mile Post 27.3 Wreck	Dare	Historic		
	0020NHB	Ryan Site	Dare	Historic		
	0012NHB	Untagged Timber	Dare	Historic		
	0001ABS	Mashoe anchor site (anchor recovered)	Dare	Historic	IsolatedFind	
	0038NHB	Stathairly shipwreck	Dare	Historic	Vessel	
	0035NHB	Stover1 (Coble/SAW 2006)	Dare	Historic	Vessel	
	0026NHB	.25 mile N. Kohler	Dare	Historic	Vessel	
	0027NHB	1 mile N. Kohler	Dare	Historic	Vessel	
	0029BOB	149 Bufflehead Rd. wreck	Dare	Historic	Vessel	
	0029BOB	149 Bufflehead Rd. wreck	Dare	Historic	Vessel	
	0016NHB	Apparent Keelson	Dare	Historic	Vessel	
	0003SHB	B.J. Wreck	Dare	Historic	Vessel	
	0025BOB	Carl Gerhard Site	Dare	Historic	Vessel	
	0025BOB	Carl Gerhard Site	Dare	Historic	Vessel	
	0013BOB	Explorer	Dare	Historic	Vessel	
	0013BOB	Explorer	Dare	Historic	Vessel	
	0001NHB	G.A. Kohler	Dare	Historic	Vessel	
	0015NHB	Gone Site	Dare	Historic	Vessel	

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Status	UAB Code	Resource Name	County	Period	Type	State Site Number
	0034BOB	Hauseport piece (Possiblyfrom Irma)	Dare	Historic	Vessel	
	0006NHB	J. Henry Wreck (LC Ballard)	Dare	Historic	Vessel	
	0007NHB	LST Wreck	Dare	Historic	Vessel	
	0001ROS	Manteo Shad Boat	Dare	Historic	Vessel	
	0005SHB	Mark Revis Site	Dare	Historic	Vessel	
	0027BOB	Meisels Wreck Site (Maybe Irma)	Dare	Historic	Vessel	
	0027BOB	Meisels Wreck Site (Maybe Irma)	Dare	Historic	Vessel	
	0028NHB	Mile 25.7 Wreck	Dare	Historic	Vessel	
	0019NHB	Mile Post 14.8 Wreck	Dare	Historic	Vessel	
	0018NHB	Mile Post 15.6 Wreck	Dare	Historic	Vessel	
	0010NHB	Mile Post 22.8 Wreck	Dare	Historic	Vessel	
	0009NHB	Mile Post 24 Wreck	Dare	Historic	Vessel	
	0002ROS	North Roanoke Vessel /Ballast	Dare	Historic	Vessel	
	0031BOB	Ocean Bay Blvd. Bathhouse wreck	Dare	Historic	Vessel	
	0031BOB	Ocean Bay Blvd. Bathhouse wreck	Dare	Historic	Vessel	
	0005BOB	Peterson I Wreck	Dare	Historic	Vessel	
	0005BOB	Peterson I Wreck	Dare	Historic	Vessel	
	0004BOB	Peterson II Wreck	Dare	Historic	Vessel	
	0004BOB	Peterson II Wreck	Dare	Historic	Vessel	
	0005NHB	Rodanthe Wreck	Dare	Historic	Vessel	
	0008NHB	Salvo Steamer	Dare	Historic	Vessel	
	0028BOB	Schooner Ridge Shipwreck	Dare	Historic	Vessel	
	0028BOB	Schooner Ridge Shipwreck	Dare	Historic	Vessel	
	0014NHB	Two Timber Site	Dare	Historic	Vessel	
	0004CFO	Center Pier Reef Barges	Federal	Historic	Vessel	
	0005CFO	Dredge Wreck (Playa)	Federal	Historic	Vessel	
	0002CFO	Fire Fighter Tug	Federal	Historic	Vessel	
	0001CFO	Virginius	Federal	Historic	Vessel	
	0003CFO	WR 4	Federal	Historic	Vessel	
	0002CWR	Wyanoke Landing\Ft. Dillard	Gates	Historic	Interface	
	0004CWR	Fathometer Barge	Gates	Historic	Vessel	
	0003CWR	Wyanoke Barge	Gates	Historic	Vessel	
	0011ROR	Rodney Phillips MacPhie,Jr	Halifax			
	0012ROR	Susan Preston MacPhie	Halifax			
	0015ROR	Coniott Landing	Halifax	Historic	Interface	
	0014ROR	Poplar Pt. Landing	Halifax	Historic	Interface	

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Status	UAB Code	Resource Name	County	Period	Type	State Site Number
	0010ROR	Floating Battery Tug	Halifax	Historic	Vessel	
	0016ROR	Quinsta Landing	Halifax	Historic	Vessel	
	0017ROR	Spellers Ferry Landing	Halifax	Prehistoric	Interface	
	0020OKB	Deck Rail Site	Hyde			
	0001OKB	Ellen Cloud	Hyde			
	0010OKB	Mile 60 Site	Hyde			
	0009OKB	Mile 64.3 Site	Hyde			
	0014OKB	Mile 64.3-B Site	Hyde			
	0007OKB	Mile 64.8-A Site	Hyde			
	0008OKB	Mile 64.8-B Site	Hyde			
	0002OKB	Ramp 42 Wreck	Hyde			
	0001OKI	Shell Castle	Hyde			
	0002OKI	Fort Ocracoke	Hyde	Historic	Other	
	0004SQS	Swanquarter Skiff #2	Hyde	Historic	Vessel	
	0004ROR	Poplar Pt. Barge	Martin	Historic	Vessel	
	0009ROR	USS Otsego	Martin	Historic	Vessel	
	0021ROR	Chainplate Wreck	Martin/Bertie	Historic	Vessel	
	0020ROR	Copper Wreck	Martin/Bertie	Historic	Vessel	
	0019ROR	Mast Wreck	Martin/Bertie	Historic	Vessel	
	0022ROR	Middle Wreck	Martin/Bertie	Historic	Vessel	
	0023ROR	Windless Wreck	Martin/Bertie	Historic	Vessel	
	0014NEI	Ballast Pile Site (Anomaly F)	New Hanover			
	0046NER	ChemServe Boat	New Hanover			
	0001MAI	Mason Inlet Site	New Hanover			
	0002MBI	Masonboro #3 Wreck	New Hanover			
	0038NER	Modern Steel Barge	New Hanover			
	0047NER	Mouth of Smith Creek Barge	New Hanover			
	0012NEI	Railroad Iron Site	New Hanover			
	0039NER	Rose Hill Skiff	New Hanover			
	0007NER	Point Pleasant Landing	New Hanover		Other	
	0013NEI	Two Anchors Site	New Hanover		Other	
	0104CFR	Fort Fisher Overshot Site	New Hanover	Historic	Interface	
	0033NER	Rose Hill Landing	New Hanover	Historic	Interface	
	0005MBI	3-Sabot site (End of N. Jetty Site)	New Hanover	Historic	IsolatedFind	
	0003NEI	CSS Raleigh	New Hanover	Historic	Vessel	
	0037NER	Hilton Schooner	New Hanover	Historic	Vessel	

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Status	UAB Code	Resource Name	County	Period	Type	State Site Number
	0112CFR	Market Street Ferry	New Hanover	Historic	Vessel	
	0031NER	Rose Hill Wreck	New Hanover	Historic	Vessel	
	0015NEI	Schneider Site	New Hanover	Historic	Vessel	
	0009NER	Spray	New Hanover	Historic	Vessel	
	0102CFR	Stackhouse Barge	New Hanover	Historic	Vessel	
	0106CFR	Stackhouse Hopper Dredge	New Hanover	Historic	Vessel	
	0010NEI	USS Aster	New Hanover	Historic	Vessel	
	0040NER	Winner Skiff	New Hanover	Historic	Vessel	
	0045NER	Winner Token Wreck	New Hanover	Historic	Vessel	
	0005NEI	Northrop	New Hanover	Historic	Vessel	
	0006CBB	Laque Site	New Hanover	Historic		
	0077CFR	Skinner's Railway	New Hanover	Historic	Other	
	0003CFR	A.P. Hurt	New Hanover	Historic	Vessel	
	0001CBB	Beauregard	New Hanover	Historic	Vessel	
	0011NER	Blossom Ferry West	New Hanover	Historic	Vessel	
	0036CFR	Bostic	New Hanover	Historic	Vessel	
	0050CFR	Breece Site	New Hanover	Historic	Vessel	
	0002MBB	Budda Wreck	New Hanover	Historic	Vessel	
	0020CFR	Bulkhead Barge	New Hanover	Historic	Vessel	
	0006CFR	Bulkhead Tugboat	New Hanover	Historic	Vessel	
	0099CFR	CFT North	New Hanover	Historic	Vessel	
	0101CFR	CFT South	New Hanover	Historic	Vessel	
	0003MBB	Cheatham Site	New Hanover	Historic	Vessel	
	0003MBI	Crystal Pier Wreck	New Hanover	Historic	Vessel	
	0014NER	Dixie Crystal Barge	New Hanover	Historic	Vessel	
	0004CBB	Duoro	New Hanover	Historic	Vessel	
	0074CFR	Eagles Island Crane Barge #3	New Hanover	Historic	Vessel	
	0032NER	G.E. Wreck	New Hanover	Historic	Vessel	
	0003CBB	Hebe	New Hanover	Historic	Vessel	
	0001MBI	Jetty Wreck	New Hanover	Historic	Vessel	
	0002CBB	Lynx	New Hanover	Historic	Vessel	
	0002CFR	Orange Street Wreck	New Hanover	Historic	Vessel	
	0024CFR	Sanded Barge	New Hanover	Historic	Vessel	
	0022CFR	Skinners Dock Wreck	New Hanover	Historic	Vessel	
	0001MBB	Sophia	New Hanover	Historic	Vessel	
	0030CFR	Splayed Wreck	New Hanover	Historic	Vessel	

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Status	UAB Code	Resource Name	County	Period	Type	State Site Number
	0001WBB	Station I Wreck	New Hanover	Historic	Vessel	
	0005CBB	Venus	New Hanover	Historic	Vessel	
	0068CFR	Walker Barge	New Hanover	Historic	Vessel	
	0063CFR	Work barge	New Hanover	Historic	Vessel	
	0062CFR	Workboat 2	New Hanover	Historic	Vessel	
	0080CFR	Shrimp Net Canoe-Bird Shoal	New Hanover	Prehistoric	Vessel	
	0026NER	Blossom Ferry Crossing	NH & Pender	Historic	Interface	31NH731
	0002ONB	Charles Peterson Site	Onslow			
	0003NWR	Sneads Schooner	Onslow			
	0001NWR	Waterfront Park Skiff	Onslow			
	0022NUR	Kershaw Crk. Centerbrd Wrk	Pamlico	Historic	Vessel	
	0018NUR	Otter Creek Wreck	Pamlico	Historic	Vessel	
	0008NUR	Summerwinds	Pamlico	Historic	Other	
	0023NUR	Carpenter Wreck	Pamlico	Historic	Vessel	
	0020NUR	Kershaw Creek Wood Wreck	Pamlico	Historic	Vessel	
	0034NUR	Orchard Creek Wreck	Pamlico	Historic	Vessel	
	0025NUR	Oriental Public Dock Wreck	Pamlico	Historic	Vessel	
	0024NUR	Smith Creek Barge	Pamlico	Historic	Vessel	
	0027NUR	Upper Kershaw Crk. Wreck (possibly same as NUR0019)	Pamlico	Historic	Vessel	
	0013NUR	Whortonsville Wreck #1	Pamlico	Historic	Vessel	
	0014NUR	Whortonsville Wreck #2	Pamlico	Historic	Vessel	
	0015NUR	Whortonsville Wreck #3	Pamlico	Historic	Vessel	
	0003LTR	Cullens Ballast Site	Pasquotank			
	0050PQR	Davenport brick/stone pile (Cobb Point)	Pasquotank	Historic	Interface	
	0037PQR	Stone Crib (Biggs House)	Pasquotank	Historic	Interface	
	0028PQR	Bible College Canal Barge	Pasquotank	Historic	Vessel	
	0001LTR	Hobbs Landing Ferry	Pasquotank	Historic		
	0017PQR	E.C. Square Barge #8	Pasquotank	Historic	Vessel	
	0018PQR	E.C. Square Barge #9	Pasquotank	Historic	Vessel	
	0002TPI	New Topsail North Wreck	Pender	Historic	Vessel	
	0003TPI	Old Topsail North Wreck	Pender	Historic	Vessel	
	0001TPI	Phantom	Pender	Historic	Vessel	
	0006NER	Oaks Plantation	Pender	Historic	Interface	
	0016BKR	Peachtree Landing	Pender	Historic	Interface	
	0017BKR	Railway Iron Site	Pender	Historic	IsolatedFind	
	0034NER	Grant Barge	Pender	Historic	Vessel	

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Status	UAB Code	Resource Name	County	Period	Type	State Site Number
	0036NER	Lanes Ferry Skiff #2	Pender	Historic	Vessel	
	0035NER	Lanes Ferry Skiff (punt)	Pender	Historic	Vessel	
	0002LTR	Barry Cullens Site	Perquimans	Historic	Vessel	
	0002PRR	Larry's Drive-in Barge	Perquimans	Historic	Vessel	
	0004ABS	Williams Anchor	Perquimans	Historic	IsolatedFind	
	0001PRR	Winfall Lumber Barge	Perquimans	Historic	Vessel	
	0003TRR	Tranters Creek Wreck	Pitt	Historic	Vessel	
	0008TRR	`Anom. B, Tranters Crk. Brdg	Pitt	Historic	Vessel	
	0002SCR	Columbia Flat Barge A	Tyrrell	Historic	Vessel	
	0003SCR	Columbia Flat Barge B	Tyrrell	Historic	Vessel	
	0005SCR	Columbia Shad Boat	Tyrrell	Historic	Vessel	
	0001SCR	Estelle Randall	Tyrrell	Historic	Vessel	
	0004SCR	Bridge Boat	Tyrrell	Historic	Vessel	
	0006SCR	Columbia Skiff	Tyrrell	Historic	Vessel	
	0018ROR	USS Southfield	Wash/Bertie	Historic	Vessel	

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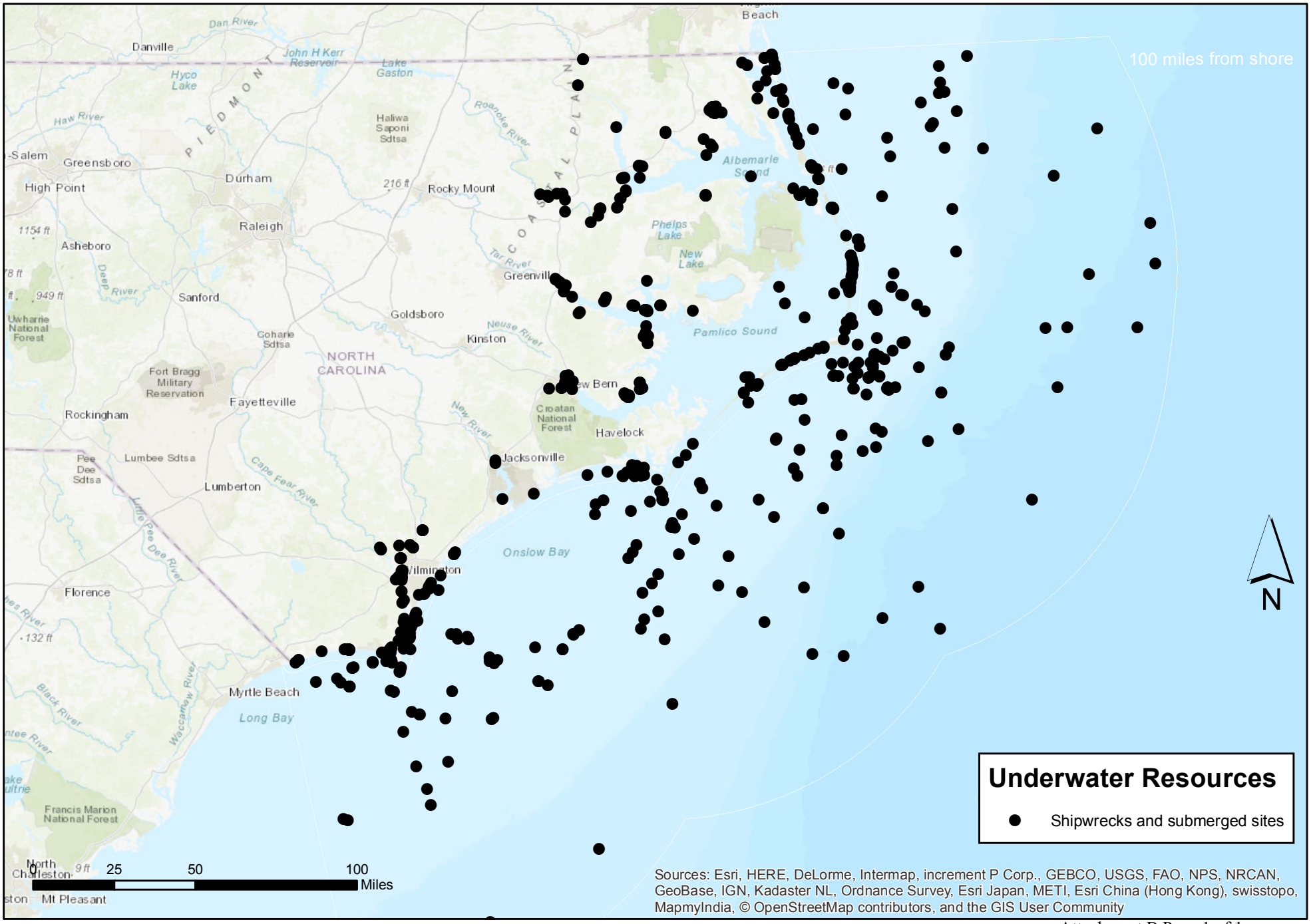
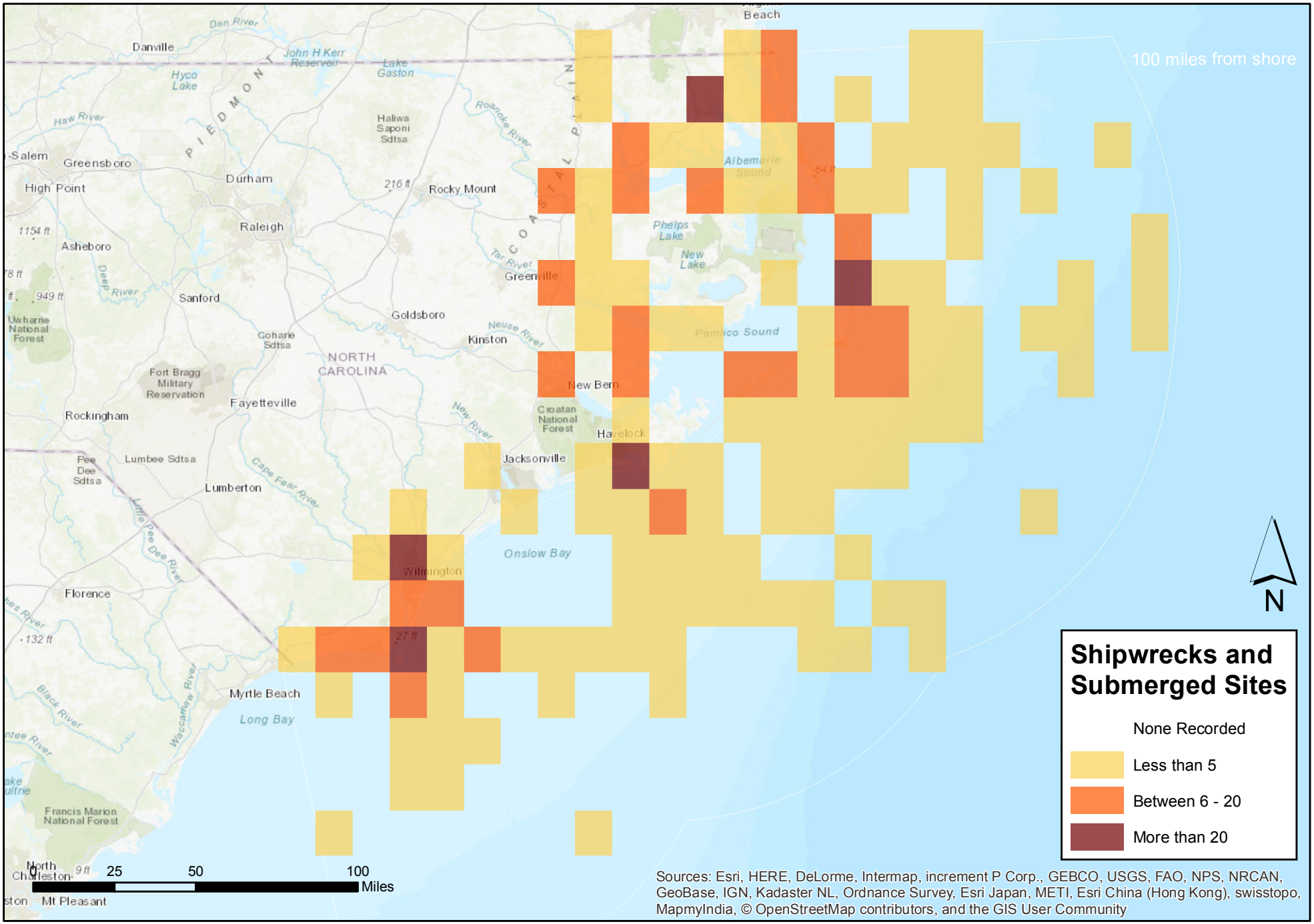
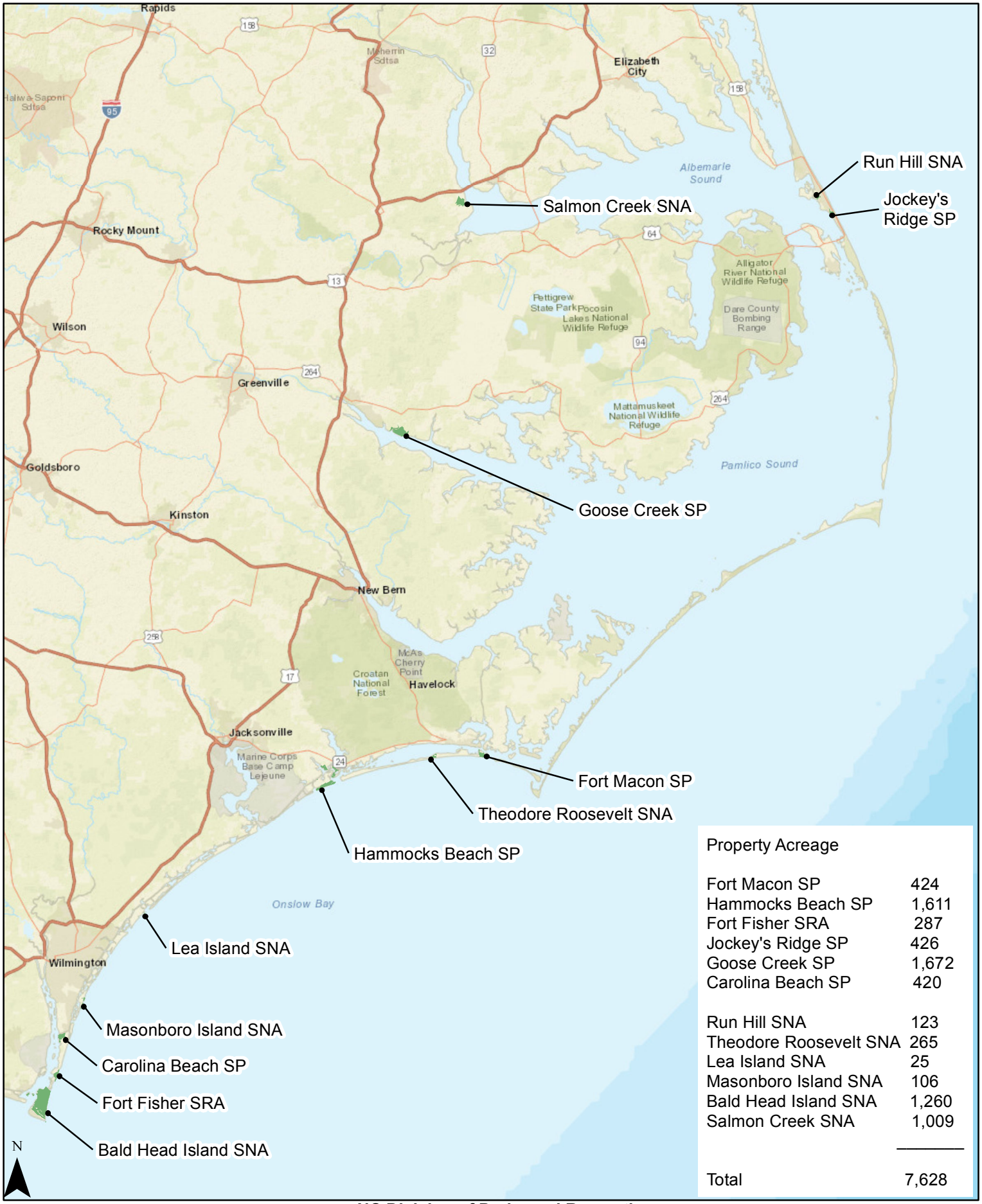
Shipwrecks and Submerged Sites of North Carolina



Shipwrecks and Submerged Sites of North Carolina





Property Acreage	
Fort Macon SP	424
Hammocks Beach SP	1,611
Fort Fisher SRA	287
Jockey's Ridge SP	426
Goose Creek SP	1,672
Carolina Beach SP	420
Run Hill SNA	123
Theodore Roosevelt SNA	265
Lea Island SNA	25
Masonboro Island SNA	106
Bald Head Island SNA	1,260
Salmon Creek SNA	1,009
Total	7,628

Legend

NC State Parks Units

NC Division of Parks and Recreation
Coastal Property and Acreage

2-21-2018

0 10 20 40 Miles

Attachment E

Office of the Governor
State of North Carolina

Roy Cooper
Governor

20301 Mail Service Center
Raleigh, N.C. 27699-0301

January 10, 2018

The Hon. Ryan Zinke, Secretary
Department of the Interior
1849 C Street, N.W.
Washington DC 20240

Dear Secretary Zinke:

I was surprised last week to learn of your Department's proposal to open the Atlantic waters off North Carolina and other states to the prospect of offshore oil drilling. I was even more surprised this week to see your decision to remove Florida from that list of states prior to a public comment period.

Just as you acknowledge in removing Florida, offshore drilling threatens tourism, which is a vital economic driver. The same holds true for North Carolina.

Coastal tourism generates $3 billion annually in North Carolina and supports more than 30,000 jobs in the eastern part of the state. Commercial fishing brings in another $95 million every year. In addition, North Carolina has over 300 miles of coastline, 2.3 million acres of estuarine waters, and over 10,000 miles of estuarine shoreline. All of these contribute to a robust national economy.

I have told your Department before and will share again in formal comments, offshore drilling threatens North Carolina's coastal economy and environment, yet offers our state little economic benefit.

We cannot afford to endanger our ecologically sensitive coastlines or the natural resources that are the foundation of our state's tourism industry and coastal economy.

My staff has already been in touch with your office to request a phone call or meeting on this topic, and I reiterate that request now. I look forward to speaking with you to share just how damaging your proposal would be to North Carolina and our nation's coastlines.

Very truly yours,

Roy Cooper

January 17, 2018

The Honorable Ryan Zinke
Secretary
U.S. Department of the Interior
1849 C Street NW
Washington, D.C. 20240

Dear Secretary Zinke,

We write today to express our joint opposition to the leasing, exploration, development and production of oil and gas in the Atlantic Ocean as proposed by the 2019-2024 Outer Continental Shelf Oil and Gas Leasing Program. We also write to request that our states and the Atlantic Coast be exempt from this program.

Like Florida, each of our states has unique natural resources and an economy that is reliant on tourism as an essential driver. We support the notion of energy diversity, but the environmental and economic importance of the Atlantic Ocean must be weighed against the potential unintended consequences of these types of activities.

More than one hundred and forty (140) local communities passed resolutions opposing offshore drilling in the Atlantic. They have also been joined by tourism associations, convention and visitors bureaus (CVB's), businesses, trade groups, and legislators from both sides of the aisle.

Not only are ocean and oceanside resources at risk, but also nearby bays, estuaries, coastal communities, iconic natural areas, and ports. The irreversible impact on ecosystems including marine mammals, fish, sea turtles, and other aquatic life that inhabit the ocean offshore is gravely concerning, as is potential risk and harm to our state's economies, our natural resources, our military installations, and our residents.

We appreciate the emphasis that you have placed on public input and urge you to grant our request to be exempt from this program.

Sincerely,

Larry Hogan

Governor Larry Hogan
Maryland

Governor Dannel P. Malloy
Connecticut

Governor John C. Carney
Delaware

Governor Roy Cooper
North Carolina

Governor Charles D. Baker
Massachusetts

Governor Gina M. Raimondo
Rhode Island

Governor Ralph S. Northam
Virginia

cc: Todd Willens, Assistant Deputy Secretary & Acting Assistant Secretary for Fish and Wildlife and Parks, U.S. Department of the Interior

Scott C. Hommel, Chief of Staff, U.S. Department of the Interior

Todd M. Wynn, Director of Intergovernmental and External Affairs, U.S. Department of the Interior

State of North Carolina

Roy Cooper
Governor

Josh Stein
Attorney General

January 22, 2018

The Honorable Ryan Zinke
Secretary of the Interior
Department of the Interior
1849 C Street, N.W.
Washington, DC 20240

Re: 2019-2024 National Outer Continental Shelf Oil and Gas Leasing Draft Proposed Program

Dear Secretary Zinke:

We write to ask that you protect our state's coast by withdrawing your proposed offshore drilling program. We also write to advise you that, if necessary, we will take all appropriate legal action to protect North Carolina jobs and natural resources.

You recently promised that the Department of the Interior, under your leadership, will "listen to the voices of communities." You claimed, "We're the collaborative department. We want to work with local communities. We want to solve problems rather than create them."

We ask you to match your words with actions, because we are deeply concerned about the impact of your proposed offshore drilling program on the state of North Carolina. Your proposal puts in danger tens of thousands of jobs and the $3 billion in annual revenue created by coastal tourism in North Carolina.

Harm to North Carolina and its economy

On August 17, 2017, North Carolina filed a public comment letter detailing the danger to our state from oil and gas drilling off our coast. That August 2017 letter is enclosed. Before sending the letter, our Department of Environmental Quality held three public hearings to solicit citizen input. At those hearings, the vast majority of speakers opposed offshore oil and gas development. Of the hundreds of written comments that we received, 97% opposed offshore drilling. Thirty coastal communities in our state have passed resolutions opposing drilling. Most recently, the commissioners in Brunswick County – which had been one of only two counties in the state that had announced support for offshore drilling – voted to rescind that earlier support.

North Carolina local communities are extremely – and rightly – concerned about offshore drilling because of the unique ecology and economy of North Carolina's coast. Tens of thousands of jobs depend on our coastal waters. In 2016, our state's commercial fishing industry supported an estimated 7,410 jobs and $166 million of income. Recreational fishing supported an estimated 15,069 jobs and generated $621 million in income; our coastal waters drew 1.4 million recreational anglers on 5.4 million trips. Tourism along our coast supports an additional 30,000 jobs. Visitors to our coast spent more than $3 billion in 2015, including an estimated $650 million in wages and tips.

Reports suggest that potential oil and gas developers could be most interested in a point near Cape Hatteras, a thriving tourist destination, the site of one of our state's most famous historic landmarks, and also a remarkably productive fisheries area.

North Carolina has 326 miles of ocean beaches and 2.3 million acres of estuarine waters, the second-largest estuarine complex in the continental United States. Because of its slow rate of water exchange, the Albemarle-Pamlico estuary is especially susceptible to damage from even small leaks and spills. Further, oil and gas development off our state's coastline poses unique dangers, including the possibility of destabilizing known underwater landslides off our shore; this increases the probability of an ecological disaster like the Deepwater Horizon spill.

We ask you to listen to the people of North Carolina

Before the March 9, 2018 deadline, we intend to submit further, formal comments on your agency's Draft Proposed Program that detail the harm to North Carolina created by your proposal.

Your plans to permit offshore drilling off the North Carolina coast deeply affect the people of our state. Your process for developing and carrying out those plans has, so far, failed to listen to the people of North Carolina.

We urge you to reverse course and abandon your harmful plan to allow offshore drilling off North Carolina's coast. If you do not, we will oppose you vigorously, using all available legal tools.

Sincerely,

Roy Cooper

Josh Stein

Enclosure