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# Toward a Virginia Ocean Plan: Lessons and Recommendations from Other States



Chesapeake Bay Bridge Tunnel at Sunrise – Photo by Nathaniel Dominy, 2011

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Fall 2021

## About the Authors



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## About the Virginia Coastal Policy Center

The Virginia Coastal Policy Center (VCPC) at the College of William & Mary Law School provides science-based legal and policy analysis of ecological issues affecting the state's coastal resources, providing education and advice to a host of Virginia's decision-makers, from government officials and legal scholars to non-profit and business leaders.

With two nationally prominent science partners – the Virginia Institute of Marine Science and Virginia Sea Grant – VCPC works with scientists, local and state political figures, community leaders, the military, and others to integrate the latest science with legal and policy analysis to solve coastal resource management issues. VCPC activities are inherently interdisciplinary, drawing on scientific, economic, public policy, sociological, and other expertise from within the University and across the country. With access to internationally recognized scientists at VIMS, to Sea Grant's national network of legal and science scholars, and to elected and appointed officials across the nation, VCPC engages in a host of information exchanges and collaborative partnerships.

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VCPC grounds its pedagogical goals in the law school's philosophy of the citizen lawyer. VCPC students' highly diverse interactions beyond the borders of the legal community provide the framework for their efforts in solving the complex coastal resource management issues that currently face Virginia and the nation.

## I. INTRODUCTION

Virginia's ocean waters feature vast natural resources, and are used by its residents, visitors, and the military for recreation, commerce, and national security. New and intensified uses, such as offshore energy production, aquaculture, and increased shipping could impact Virginia's ocean resources. To ensure the continued protection of these resources, while allowing them to be used sustainably, the Commonwealth is developing its first ocean management plan. Because several state agencies currently manage Virginia's territorial sea waters, a coordinated and proactive approach is needed to effectively develop this plan. Developing a Virginia Ocean Plan can help protect the Commonwealth's ocean resources and facilitate coordination among federal, state, and local bodies as pressures increase.

Virginia can learn from the states that have already developed state ocean plans, as well as from regional ocean planning efforts. The plan can be implemented through enforceable state-level lawmaking, gubernatorial executive orders, memoranda of understanding (MOUs) between state and federal agencies, or formal adoption of its policies and guidelines by relevant state agencies. Additionally, Virginia can build upon the progress it has made regionally as a member of the Mid-Atlantic Regional Council on the Ocean (MARCO) to coordinate with neighboring states and stakeholders to successfully meet the goals of its ocean plan.<sup>1</sup> This white paper analyzes several states' ocean plans to provide lessons learned and other helpful guidance to Virginia's ocean planning process. It then recommends potential options and topics to implement the successful practices and avoid negative experiences of other states.

## II. OTHER STATE PLANS & APPROACHES

The states analyzed in this paper were chosen because they are geographically close to Virginia, share similar ecological concerns with Virginia, or feature other aspects of their plans that merit comparison.<sup>2</sup> For instance, while West Coast states have less in common with Virginia ecologically and oceanographically, Washington and Oregon are included because these states were at the forefront of ocean planning, and therefore their approaches to the process are valuable examples. Massachusetts and New York are included because their plans are thoroughly developed, and they share many of Virginia's challenges and objectives. Further, because South Carolina and North Carolina both took preliminary steps towards the creation of comprehensive ocean plans but fell short of achieving that in the end, their efforts are helpful to consider for these lessons learned, as well as because of their ecological similarities and geographic proximity to the Commonwealth.

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<sup>1</sup> MID-ATLANTIC REGIONAL COUNCIL ON THE OCEAN, MID-ATLANTIC REGIONAL OCEAN ACTION PLAN (2016), <https://www.boem.gov/sites/default/files/environmental-stewardship/Mid-Atlantic-Regional-Planning-Body/Mid-Atlantic-Regional-Ocean-Action-Plan.pdf> [hereinafter MARCO Plan].

<sup>2</sup> Many states not included in this review focus more extensively on coastal management in their ocean plans, had different priorities than Virginia, or were too far removed from Virginia's situation in terms of resources devoted to the development of their plan.

## A. Massachusetts

Massachusetts has implemented a thorough and comprehensive plan for managing their ocean resources. In 2008, the Massachusetts legislature passed the Oceans Act, which called for the creation of a comprehensive ocean plan and led to the 2009 Massachusetts Ocean Management Plan.<sup>3</sup> In 2015 a revision by the Ocean Advisory Commission and Ocean Science Advisory Council, chaired by the Secretary of Energy and Environmental Affairs, created an updated version of the plan (2015 Plan).<sup>4</sup> A key component of the plan is a marine spatial planning system that establishes management areas.<sup>5</sup> In the plan, the state has designated the majority of the waters it controls, out to three nautical miles off shore, as “multi-use,” a designation generally allowing open and free access.<sup>6</sup> The multi-use designation allows any use of the waters that does not require a permit.<sup>7</sup> Other key features of the Massachusetts 2015 Plan include a review schedule, coordinated development, and scientific and cultural studies.<sup>8</sup>

Another notable aspect of Massachusetts’ ocean plan is that it explicitly requires scheduled reviews and allows for revisions based on those reviews. Massachusetts’ Ocean Act and ocean plan requires a review of the plan every five years headed by the Secretary of Energy and Environmental Affairs (EEA).<sup>9</sup> The reviews are mandated by the initial 2008 law and were enacted in the Massachusetts Code of Regulations as a way to implement the call for the plan to be an evolving document.<sup>10</sup> After the necessary review, a new plan was released for public review in 2021 and finalized in 2022.<sup>11</sup> The review period allows the Commonwealth to amend the plan due to changing trends, new and developing science, and public and commercial reception to the plan. While the Commonwealth need not amend the plan based on the five-year review, the requirement forces re-evaluation to ensure the state is keeping best practices and accurate data as the basis of its plan. Further, there are certain aspects of the plan that require a review before they can be changed, such as creation or deletion of protected areas, to allow for input from the public and advisory boards.<sup>12</sup>

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<sup>3</sup> COASTAL ZONE MANAGEMENT OCEAN MANAGEMENT PROGRAM, 2015 MASSACHUSETTS OCEAN MANAGEMENT PLAN, VOLUME 1 1-1 (2015), <https://www.mass.gov/files/documents/2016/08/ua/2015-ocean-plan-v1-complete-low-res.pdf> [hereinafter MASSACHUSETTS 2015 PLAN].

<sup>4</sup> *See id.* The 2015 plan is current as of 2021.

<sup>5</sup> *Id.* at 1-4.

<sup>6</sup> *See id.* at 2-(1-4). Ninety-eight percent of state waters fall into the multi-use category. *Id.*

<sup>7</sup> *Id.* at 2-4.

<sup>8</sup> *Id.* at 1-1.

<sup>9</sup> *Id.*

<sup>10</sup> MASS. GEN. LAWS ch. 21A, §4C (2008), <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter21a/Section4c>; 301 MASS. CODE REGS. 28.07 (2008), <https://www.mass.gov/doc/301-cmr-2800-ocean-management-plan/download>.

<sup>11</sup> COASTAL ZONE MANAGEMENT OCEAN MANAGEMENT PROGRAM, DRAFT 2021 MASSACHUSETTS OCEAN MANAGEMENT PLAN, VOLUME 1, 3 (2021), <https://www.mass.gov/files/documents/2021/09/20/2021-draft-ocean-mgt-plan-v1.pdf> [hereinafter 2021 DRAFT REVISION]. COASTAL ZONE MANAGEMENT OCEAN MANAGEMENT PROGRAM, 2021 MASSACHUSETTS OCEAN MANAGEMENT PLAN, VOLUME 1, 3 (2022), <https://www.mass.gov/files/documents/2022/01/03/ma-ocean-plan-2021-vol-1.pdf>.

<sup>12</sup> 301 MASS. CODE REGS. 28.07 (4) (2008).

The committees that created the 2015 Plan coordinated development of the plan by consulting interstate partners, federal agencies, tribal bodies, and the public at various stages.<sup>13</sup> Input from these sources was beneficial for identifying areas of concern and tapping resources that the state might not be able to identify from purely scientific or agency-driven planning.<sup>14</sup> The coordinated development process facilitated interaction between regional, federal, and tribal bodies that predate the creation of the 2009 or 2015 Plan, by centuries and even millennia.<sup>15</sup> Finally, the EEA secretary that led the review requested multiple groups conduct scientific, cultural, and academic studies to provide a comprehensive picture of the uses of the state waters.<sup>16</sup> These working group reports provided the basis for the 2015 Plan and allowed varying voices to be heard and to provide input.<sup>17</sup> The 2021 draft revision of the plan, reflects the changes being contemplated and highlights where the changes made in the 2015 revision process were successful.<sup>18</sup> The 2021 draft proposed redrawing some of the management areas, such as reducing the amount of area designated for wind energy production and updating the fee structures for inflation.<sup>19</sup>

## B. New York

New York is like Virginia in several significant ways. Both states have large coastal economies and a little over 100 miles of shoreline, both share adjacent bodies of water with neighboring states and both are within the Mid-Atlantic region.<sup>20</sup> For these reasons, Virginia should consider adopting the successful attributes of the New York Ocean Action Plan (OAP).<sup>21</sup> The OAP, released in 2017, is a ten-year plan that focuses on the waters south of Long Island.<sup>22</sup> The OAP has distilled its purpose into four goals: (1) ensuring ecological integrity; (2) promoting economic growth, coastal development, and human use; (3) increasing resilience; and (4) empowering the public in ocean stewardship.<sup>23</sup> These four goals subdivide into additional

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<sup>13</sup> MASSACHUSETTS 2015 PLAN, *supra* note 3, at 3-10. There is not a required list of partners in the plan, but rather a mentioning of all the sources that they received input from in its development. The four categories of groups that were singled out are not an exhaustive list of the groups that helped create the 2015 Plan. *See id.*

<sup>14</sup> *See id.*

<sup>15</sup> The Wampanoag and Narragansett tribes, both of whom collaborated on drafting the Plan, have been in the region for millennia.

<sup>16</sup> MASSACHUSETTS 2015 PLAN, *supra* note 3, at 1-3.

<sup>17</sup> *Id.*

<sup>18</sup> 2021 DRAFT REVISION, *supra* note 11, at 5-8.

<sup>19</sup> *Id.* The wind energy area reduction was due to findings that the areas were not suitable for energy production, and advances in offshore wind turbine technology allowing for turbines outside of Massachusetts' waters. *Id.*

<sup>20</sup> *New York*, NOAA OFFICE OF COASTAL MANAGEMENT, <https://coast.noaa.gov/states/new-york.html> (last modified Nov. 17, 2021) (showing New York's coastal economy is equal to over \$1.4 trillion in GDP). *Compare* JANICE CHERYL BEAVER, U.S. INTERNATIONAL BORDERS: BRIEF FACTS 3 (2006), <https://sgp.fas.org/crs/misc/RS21729.pdf> (showing Virginia's coastline at 112 miles and New York's at 127) *with* *Worldmark Encyclopedia of the States*, City-Data.com, <http://www.city-data.com/states/index.html> (showing Virginia's boundary length at 1,356 miles and New York's at 1,430 miles). The Potomac River and Chesapeake Bay adjoin Virginia and Maryland while New York shares the Long Island sound with Connecticut. *See* Map of Eastern US, *in* GOOGLE MAPS, <https://www.google.com/maps/d/u/0/edit?hl=en&hl=en&mid=1CJpxuU5mVyCG4j92eN6PyncyqYWVDCiU&ll=39.316829119166414%2C-75.85194038906249&z=7> (last visited May 9, 2022).

<sup>21</sup> DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK OCEAN ACTION PLAN: 2017-2027 (2017), [https://www.dec.ny.gov/docs/fish\\_marine\\_pdf/nyoceanactionplan.pdf](https://www.dec.ny.gov/docs/fish_marine_pdf/nyoceanactionplan.pdf) [hereinafter NEW YORK OAP].

<sup>22</sup> *Id.* at 6.

<sup>23</sup> *Id.* at 2.

objectives and specific actions that have been identified to achieve them.<sup>24</sup> The OAP further acknowledges the role that federal, regional and interstate collaboration must play in effectively implementing a successful plan.<sup>25</sup>

New York's state-controlled waters are much deeper than Virginia's and therefore the OAP focuses on deep water issues more than Virginia's plan probably will.<sup>26</sup> Two strengths of the New York OAP are its simplified goals and its well-defined interdepartmental coordination. The explicitly stated goals of the OAP make it easy to identify how portions of the OAP should be implemented based on which specific goal they promote and make it easier to track whether the stated goals are being met.<sup>27</sup> The breakdown of each goal into a specific objective and further to an action that can be taken or monitored makes implementation of the OAP easier to track.

New York divides the implementation and coordination of its OAP among many state departments including the Department of Environmental Conservation, the Department of State, the Office of General Services, and local and tribal governments.<sup>28</sup> With the help of the goals, objectives and actions laid out in their framework, the New York Department of Environmental Conservation has delegated the specific actions of the OAP to different state agencies to implement them.<sup>29</sup> The state developed a flow chart for the sixty-one actions in the OAP that shows which state agency is responsible for each action.<sup>30</sup> The chart also lists local, federal, interstate, tribal and other partners that will work with the agencies to meet the goals of the OAP.<sup>31</sup>

### C. South Carolina

In 2008, the South Carolina Department of Health and Environmental Control organized the Ocean Planning Work Group (OPWG), which released its final Ocean Report in 2012.<sup>32</sup> The group was funded by a grant from NOAA under the Coastal Zone Management Act (CZMA)

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<sup>24</sup> *Id.*

<sup>25</sup> New York and Connecticut collaborated on the Long Island Sound Blue Plan that covers the waters of the Long Island Sound. This body of water is not considered to be ocean waters but shares many similarities and thus the Blue Plan is mentioned in the OAP as a source of collaboration. *Id.* at 56. The OAP, however, focuses more on the blue-water open-ocean areas south of Long Island. *Id.* at 6.

<sup>26</sup> *Atlantic Ocean Depth Map (Nautical Chart)*, FISHERMAP, <https://usa.fishermapping.org/depth-map/atlantic-ocean/> (last updated 2021) (showing Virginia with a maximum depth of fifty feet within its three nautical mile line and New York with a maximum depth of 115 feet).

<sup>27</sup> NEW YORK OAP, *supra* note 21, at 2.

<sup>28</sup> *See id.* This may be necessary in Virginia as its current Coastal Zone Management Program is networked and not the responsibility of a single state agency, so a Virginia ocean plan may need to be spread over multiple agencies. *See* discussion *infra* Section IV (E).

<sup>29</sup> *Summary of Actions in NY Ocean Action Plan*, DEPT. OF ENV'T CONSERVATION, <https://www.dec.ny.gov/lands/100471.html> (last updated 2017).

<sup>30</sup> *Id.*

<sup>31</sup> *See id.*

<sup>32</sup> SC OCEAN PLANNING WORK GROUP, SOUTH CAROLINA OCEAN REPORT: A FOUNDATION FOR IMPROVED MANAGEMENT AND PLANNING IN SOUTH CAROLINA (2012) <https://scdhec.gov/sites/default/files/Library/CR-010549.pdf> [hereinafter SC OCEAN REPORT]. The work group was established under the Department of Health and Environmental Control's Office of Ocean and Coastal Resource Management and included representatives of state agencies, academics and non-profit contributors. *Id.* at 9.

section 309, the same source Virginia is using to fund its planning process.<sup>33</sup> The OPWG's stated goal was increased communication between state agencies and researchers, and creation of the Ocean Report to foster future research, education, and policy.<sup>34</sup> In the report the OPWG made nine recommendations,<sup>35</sup> which share the common themes of sustainable utilization, environmental concern, and reduction of conflict between parties operating on South Carolina waters.<sup>36</sup> The report highlights the regional cooperation among South Carolina, Georgia, Florida, and North Carolina under the Governor's South Atlantic Alliance, which identified the shared priority areas of the states in the region.<sup>37</sup> The goal of this regional alliance is to implement beneficial regional strategies for its five member states.<sup>38</sup> Additionally, the OPWG's work centered on numerous public workshops to help them achieve their nine recommendations.<sup>39</sup> By allowing public meetings to steer the Ocean Report's direction, the OPWG garnered broad support for the report they produced.<sup>40</sup>

The South Carolina Ocean Report highlights the need for continued momentum, structured progress, and milestones toward the creation of a comprehensive ocean plan. South Carolina laid the necessary groundwork in terms of stakeholder engagement and data collection but fell short of a forward-looking ocean plan due to, among other things, agency staffing issues affecting the ability to continue the work and more pressing concerns, like shoreline erosion, taking precedence.<sup>41</sup> The Ocean Report persists as a guide for state agencies, but without a clear overarching drive or vision it will be harder to achieve desired outcomes or maintain progress toward them. None of the nine recommendations the Ocean Report made have occurred.<sup>42</sup>

## D. North Carolina

North Carolina, much like South Carolina, worked toward creating a functioning comprehensive ocean management plan, but ultimately fell short. The Ocean Policy Steering Committee, created by grant in 2008 with funding from NOAA, Sea Grant North Carolina, and other state agencies, released its final report in 2009 (2009 Report).<sup>43</sup> The North Carolina Coastal Resources Law, Planning and Policy Center prepared the report, which was then published by the

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<sup>33</sup> SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL DIVISION OF OCEAN AND COASTAL RESOURCE MANAGEMENT, SOUTH CAROLINA COASTAL MANAGEMENT PROGRAM SECTION 309 ASSESSMENT AND STRATEGY 2016-2020 35 (2016) <https://coast.noaa.gov/data/czm/enhancement/media/sc309-2016.pdf>.

<sup>34</sup> SC OCEAN REPORT, *supra* note 32.

<sup>35</sup> *Id.* at 11.

<sup>36</sup> *See id.* at 145-151. The nine recommendations are listed under seven topic area headings: Ocean Management, Living Marine Resources and Habitats, Ocean Energy, Sand Resources, Marine Aquaculture, Ocean Mapping, and Ocean Monitoring. *Id.*

<sup>37</sup> *Id.* at 10.

<sup>38</sup> *Id.* at 23, 31.

<sup>39</sup> *Id.* at 10, 153.

<sup>40</sup> OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT, STATE OCEAN MANAGEMENT PLANS AND POLICIES: SYNTHESIS REPORT 19 (2006), [https://scdhec.gov/sites/default/files/docs/HomeAndEnvironment/Docs/Ocean\\_Mgt\\_Plans\\_Policies.pdf](https://scdhec.gov/sites/default/files/docs/HomeAndEnvironment/Docs/Ocean_Mgt_Plans_Policies.pdf).

<sup>41</sup> Telephone interview with Barbara Neale, Senior Program Analyst, South Carolina Department of Health and Environmental Control's Office of Ocean and Coastal Resource Management (Jan. 12, 2022).

<sup>42</sup> *Id.*

<sup>43</sup> JOSEPH J. KALO ET AL., DEVELOPING A MANAGEMENT STRATEGY FOR NORTH CAROLINA'S COASTAL OCEAN (2009), [https://ncseagrant.ncsu.edu/ncseagrant\\_docs/products/2000s/developing\\_mgmt\\_strategy.pdf](https://ncseagrant.ncsu.edu/ncseagrant_docs/products/2000s/developing_mgmt_strategy.pdf) [hereinafter NC OCEAN STRATEGY].



committee.<sup>44</sup> Since the 2009 Report, North Carolina has done no further work to develop a comprehensive ocean plan.<sup>45</sup> The 2009 Report made specific policy recommendations that state agencies should follow, but it did not require them to implement a comprehensive ocean plan, which would have required a mandate to do so from state-level lawmaking or executive orders.<sup>46</sup> The 2009 Report concluded with recommendations how to achieve a comprehensive ocean plan in the future.<sup>47</sup>

The committee focused on sand resource management, ocean based alternative energy, ocean outfalls, and ocean aquaculture.<sup>48</sup> While no comprehensive plan for North Carolina emerged from the 2009 Report, it did impact coastal management policy in the state. For instance, the Department of Environmental and Natural Resources adopted the Beach and Inlet Management Plan in 2011 that the 2009 Report called for at the conclusion of the section on sand resource management.<sup>49</sup> The 2009 Report recommended an update to the maps of North Carolina’s ocean as a precursor to work on a comprehensive ocean plan, which the report called “beneficial to North Carolina and its communities.”<sup>50</sup> The report also recommended either increasing the authority of particular agencies to allow effective administration, or to spread administration of the plan piecemeal over multiple agencies.<sup>51</sup>

One particularly important aspect of North Carolina’s efforts is the public feedback the state received from stakeholders. Specifically, the 2009 Report includes an appendix of meeting minutes from public meetings held across the coastal regions of the state prior to the release of the report detailing public concerns and perception of the committee’s work.<sup>52</sup> This feature of the report provides some insight into the potential concerns that Virginia residents may have in response to the creation of a Virginia Ocean Plan, especially because of the geographic and economic similarities of these two states. One common concern was funding the program, which committee members spoke about at the meetings at length.<sup>53</sup> The comments and responses of the committee—as well as the priorities of the new political majority after the 2009 Report<sup>54</sup>—shed light on the direction of the state since the report’s release and its lack of further work on a

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<sup>44</sup> *Id.*

<sup>45</sup> See NORTH CAROLINA DIVISION OF COASTAL MANAGEMENT, ASSESSMENT AND STRATEGY OF THE NORTH CAROLINA COASTAL MANAGEMENT PROGRAM (2021), <https://deq.nc.gov/media/20405/download>. Among other things, the change of political parties after release of the report led to a shift in priorities resulting in the lack of new developments. See Kalo, *infra* note 54.

<sup>46</sup> NC OCEAN STRATEGY, *supra* note 43, at 66.

<sup>47</sup> *Id.* at 64-66. The final section of the 2009 Report also includes a brief overview of other state and international ocean plans in place or under development at the time as well as a review of North Carolina’s current laws affecting their ocean resources. *Id.* at 62-65.

<sup>48</sup> *Id.* at i-ii. The ending of each of the four subject area sections left recommendations for future work but focused mainly on coastal resources or impact on coastal communities.

<sup>49</sup> *Id.* at 10; NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, BEACH AND INLET MANAGEMENT PLAN (2011), <https://deq.nc.gov/about/divisions/coastal-management/coastal-management-oceanfront-shorelines/beach-inlet-management-plan/bimp-final-report>. The Beach and Inlet Management Plan was created by the Division of Water Resources and the Division of Coastal Management. *Id.*

<sup>50</sup> NC OCEAN STRATEGY, *supra* note 43, at 66. No specific group was identified to carry out the update of the maps, however the report recommends involving the Coastal Habitat Protection Plan in the mapping update. *Id.*

<sup>51</sup> *Id.*

<sup>52</sup> *Id.* at 69-84.

<sup>53</sup> *Id.* at 70-71.

<sup>54</sup> Telephone interview with Joseph J. Kalo, Graham Kenan Professor of Law Emeritus, Univ. N.C. (Dec. 17, 2021).

comprehensive ocean plan. Since the release of the report, the state's focus has been on coastal communities and the impact that policies will have on them and their limited land due to a large portion of them being barrier islands.<sup>55</sup>

Much of the work of the North Carolina Department of Environmental Quality on ocean planning and coastal management since the 2009 Report, including the creation of the Beach and Inlet Management Plan, has focused on coastal communities and the environmental impacts on them from erosion and storms.<sup>56</sup> While a lot of the work that would need to happen for NC to create an ocean plan is reflected in the 2009 Report, there has been no substantial further work on this issue done in the past decade.

## E. Oregon

In 1987, the Oregon State Legislature established the Oregon Resources Task Force to create a comprehensive ocean management plan.<sup>57</sup> After meeting with community groups and other state agencies to determine which issues the plan should address, the Task Force prepared the 1990 Oregon Ocean Resources Management Plan (Ocean Plan).<sup>58</sup> The Ocean Plan is not limited to state waters, rather it identifies an "Ocean Stewardship Area" that encompasses the area within fifty nautical miles (nm) of the coast.<sup>59</sup> Acting on the Task Force's recommendations, the 1991 Oregon legislature passed the Oregon Ocean Resources Management Act, which established an Ocean Resources Program and designated the Oregon Department of Land Conservation and Development (DLCD) as the program's lead agency.<sup>60</sup>

That same year, the state legislature created the Oregon Ocean Policy Advisory Council (OPAC) to provide advice to the Governor, state agencies, and local governments on ocean policy and management issues.<sup>61</sup> OPAC consists of representatives from coastal community groups, local government and tribes, several state agencies, and the general public. Though OPAC does not possess direct regulatory authority, state agencies are required to act consistently with its recommendations once those recommendations have been approved by DLCD.<sup>62</sup> As its first project, OPAC was tasked with creating a Territorial Sea Plan (TSP) to provide guidance to state and federal entities in managing uses within three nm of Oregon's coast.<sup>63</sup> First adopted in 1994

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<sup>55</sup> *See id.*

<sup>56</sup> NORTH CAROLINA DIVISION OF COASTAL MANAGEMENT, *supra* note 45, (stating that the achievements of the state agencies from 2016-2020 are delineation of areas of inlet effluence, improving calculation of oceanfront shoreline change rates, and development of a North Carolina Coastal Community Resilience Guide).

<sup>57</sup> OREGON OCEAN RESOURCES MANAGEMENT PLAN, OREGON DEP'T OF LAND CONSERVATION AND DEVELOPMENT 5 (1991), <https://www.oregon.gov/lcd/OCMP/Pages/Ocean-Plan.aspx> [hereinafter ORMP].

<sup>58</sup> *Id.*

<sup>59</sup> *Id.* at 13.

<sup>60</sup> *Ocean Policy in Oregon*, DLCD, <https://www.oregonocean.info/index.php/ocean-policy/64-ocean-policy-in-oregon> (last visited Nov. 15, 2021).

<sup>61</sup> *See* ORMP, *supra* note 57, at 166.

<sup>62</sup> OR. REV. STAT. § 196.443 (2019), [https://oregon.public.law/statutes/ors\\_196.443](https://oregon.public.law/statutes/ors_196.443).

<sup>63</sup> *Oregon Territorial Sea Plan, Part One: Ocean Management Framework*, OREGON OCEAN POLICY ADVISORY COUNCIL (1994), [https://www.oregon.gov/lcd/OCMP/Documents/otsp\\_1-a.pdf](https://www.oregon.gov/lcd/OCMP/Documents/otsp_1-a.pdf).

by the state legislature, the TSP has been amended several times by OPAC and DLCD to reflect changing needs and uses.<sup>64</sup>

A 2009 amendment added Part Five of the TSP, “Use of the Territorial Sea for the Development of Renewable Energy Facilities.”<sup>65</sup> Part Five describes the process for evaluating the viability of renewable energy facilities and includes requirements for those facilities should they become operational.<sup>66</sup> It also provides a siting system to identify appropriate locations for development to minimize potential adverse effects on existing ocean resources, delegating to DLCD the authority to identify “Designated Areas” in which less strict review standards are applied than other areas of the territorial sea.<sup>67</sup> While developers are free to apply for a lease in other parts of the territorial sea, the lower standards in these areas encourage developers to target those areas that the state has deemed more suitable for development.<sup>68</sup> In federal waters, DLCD’s role is to review federal decisions to authorize renewable energy development on the outer continental shelf, provided the facility will have reasonably foreseeable effects on Oregon’s coastal resources.<sup>69</sup> DLCD’s review determines whether the federal decision is consistent with the CZMA, the TSP, and the coastal management program.<sup>70</sup>

Part Five of the TSP also establishes requirements that lease applicants must meet. To ensure that development and operation of a potential facility will comport with Oregon’s conservation goals, applicants must satisfy a set of stringent review standards, which are enumerated in the amendment.<sup>71</sup> Should an applicant pass that initial evaluation, it is then obligated to submit a host of development and operation plans that are then assessed separately.<sup>72</sup> These standards are derived from the U.S. Bureau of Ocean Energy Management’s (BOEM) leasing standards in order to maintain consistency between the state and federal processes.<sup>73</sup> Oregon’s process is conducted by a Joint Agency Review Team (JART), comprised of representatives from various state and federal agencies, local government, and tribes.<sup>74</sup> Part Five’s layered approach to energy development demonstrates how a demanding review system can ensure that conservation objectives are prioritized and that all interested parties are brought to the table.

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<sup>64</sup> *Territorial Sea Plan*, DLCD, <https://www.oregon.gov/lcd/OCMP/Pages/Territorial-Sea-Plan.aspx> (last visited Nov. 15, 2021).

<sup>65</sup> *Oregon Territorial Sea Plan, Part Five: Uses of Territorial Sea*, OREGON OCEAN POLICY ADVISORY COUNCIL 2 (2009), [https://www.oregon.gov/lcd/OCMP/Documents/TSP\\_Part5\\_FINAL\\_2019Combined.pdf](https://www.oregon.gov/lcd/OCMP/Documents/TSP_Part5_FINAL_2019Combined.pdf).

<sup>66</sup> *See id.*

<sup>67</sup> *Id.* at 4.

<sup>68</sup> Telephone interview with Andy Lanier, Marine Affairs Coordinator, Oregon DLCD, (Jan. 21, 2022).

<sup>69</sup> *Oregon Territorial Sea Plan, Part Five*, *supra* note 65, at 5.

<sup>70</sup> *Id.*

<sup>71</sup> *Id.* at 9. The Resource and Use Inventory and Effects Evaluation and Special Resources and Use Review Standards require that applicants submit information regarding location, size, and method of operation, as well as data that identifies adjacent affected areas, any geologic hazards, and any cultural or economic impacts that the facility might have. *Id.* at 8. Applicants are then obligated to submit a facility development plan, project operation plan, decommissioning plan, and financial assurance plan, to name a few. *Id.* at 23-26.

<sup>72</sup> *Id.* at 27.

<sup>73</sup> Telephone interview with Casey Dennehy, Marine Policy Associate, Wash. Dept. of Ecology (Jan. 10).

<sup>74</sup> *Oregon Territorial Sea Plan, Part Five*, *supra* note 65, at 6. The JART consists of representatives from the Oregon Departments of Fish and Wildlife, Parks and Recreation, Environmental Quality, Land Conservation and Development, Water Resources, Energy, and Geology and Mineral Industries. *Id.*

With Part Five's regulatory groundwork in place, Oregon has begun taking more substantive steps toward renewable energy development. Per a request from Oregon's Governor, DLCD partnered with BOEM to create the BOEM Oregon Intergovernmental Renewable Energy Task Force.<sup>75</sup> The Task Force provides coordination among federal, tribal, state, and local governmental bodies regarding potential renewable energy activities on Oregon's outer continental shelf.<sup>76</sup> In June of 2020, the state of Oregon and BOEM committed to wind energy planning in federal waters and BOEM is now scouting the Oregon coast for potential wind farm locations.<sup>77</sup>

Oregon's ocean planning has also allowed for significant progress regarding marine habitat protection efforts. Several sections of the original ORMP are dedicated to habitat conservation and provide broad policy recommendations to future regulators.<sup>78</sup> Acting on those recommendations, Oregon established a tiered system of marine habitat protections that vary depending on the sensitivity of the fishery or habitat.<sup>79</sup> Marine reserves are the most protective and do not allow any extractive activity, except as necessary for research or monitoring purposes.<sup>80</sup> Oregon first designated three marine reserves in 2011 and now has five within its territorial waters.<sup>81</sup> Marine Protected Areas, on the other hand, allow varying levels of extraction based on the health of the area's marine biology.<sup>82</sup> Oregon has designated nine Marine Protected Areas.<sup>83</sup> Marine Gardens and Habitat Refuges are also used to protect intertidal species. The Oregon legislature has called for an evaluation of the Marine Reserves Program and a report has been scheduled for 2023, at which point the success of the program will be evaluated.<sup>84</sup> Because the program is Oregon's first foray into a marine reserves system, the intent of the program was to gather data and conduct research on the species and habitats within the marine reserves, rather than to establish a lasting system for effective management of those waters. For that reason, the 2023 review will not evaluate whether the program facilitated ecologically beneficial results, but will use the information that has been gathered from studying the reserves to construct a system that promotes active management of important fisheries and habitats.<sup>85</sup> One possible change might be to the zero-extraction policy towards reserves, which has actually proven problematic in certain areas where population control of a particular species would be beneficial to the ecosystem as a whole.<sup>86</sup>

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<sup>75</sup> *BOEM Oregon OCS Renewable Energy Task Force*, Oregon Ocean Information, <https://www.oregonocean.info/index.php/boem-oregon-task-force> (last visited Nov. 16, 2021).

<sup>76</sup> *Id.*

<sup>77</sup> Knox Keranen, *Massive Offshore Wind Farms Could be Coming to Oregon*, THE WORLD (Jul. 5, 2021), [https://theworldlink.com/news/local/massive-offshore-wind-farms-could-be-coming-to-oregon/article\\_8450f2e6-da89-11eb-a540-5b1159cf1ac8.html](https://theworldlink.com/news/local/massive-offshore-wind-farms-could-be-coming-to-oregon/article_8450f2e6-da89-11eb-a540-5b1159cf1ac8.html).

<sup>78</sup> See ORMP, *supra* note 57, at 51-55.

<sup>79</sup> See *Management Designations for Marine Areas*, OREGON FISHING, <https://www.eregulations.com/oregon/fishing/management-designations-for-marine-areas> (last visited Nov. 16, 2021).

<sup>80</sup> See *The Reserves*, OREGON MARINE RESERVES, <https://oregonmarinereserves.com/reserves/> (last visited Nov. 16, 2021).

<sup>81</sup> *Id.*

<sup>82</sup> See OREGON FISHING, *supra* note 79.

<sup>83</sup> OREGON MARINE RESERVES, *supra* note 80.

<sup>84</sup> *Id.*

<sup>85</sup> Telephone interview with Andy Lanier, Marine Affairs Coordinator, Oregon DLCD, (Jan. 21, 2022).

<sup>86</sup> *Id.*

Because Oregon is a pioneer of the ocean planning movement, its experience contains lessons for other states. Perhaps the most notable lesson is the importance of a foundational piece of legislation that clearly expresses the state’s ocean management priorities. In Oregon, that document is Statewide Planning Goal 19: Ocean Resources. Goal 19 states that Oregon aims to “conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social value and benefits to future generations.”<sup>87</sup> Goal 19 was adopted in 1977 and has guided Oregon’s ocean management policy ever since by providing a set of implementation requirements (including the Ocean Stewardship Area) and management measures that explain how the state should prioritize its interest in conservation and sustainable development.<sup>88</sup> Goal 19 was foundational to the work of the 1987 Ocean Resources Task Force, which included the Ocean Stewardship Area in its original plan. The stewardship area was delineated to encourage scientific research on marine ecosystems and oceanographic conditions and to ensure that future management of those waters would comport with Oregon’s conservation goals within its territorial waters.<sup>89</sup> After decades of research, including surveys to gauge public tolerance for the aesthetic impact of offshore facilities, Oregon has been able to determine where it would prefer that offshore development take place. That information is now publicly accessible in an online mapping tool that shows the user what level of protection applies in a given section of the territorial sea.<sup>90</sup> Projects like this, in conjunction with the marine reserve program, underscore the importance of robust data collection in connection with ocean planning, a lesson that states like Washington have since built upon.

## F. Washington

Washington’s ocean management effort, which is primarily encompassed in its 2017 Marine Spatial Plan (MSP), serves as a good case study, in part because it demonstrates a modern and comprehensive approach. Washington’s MSP is a collaboration between numerous state agencies, which met with local community organizations, tribes, and the federal government to create a comprehensive tool to guide regulators and applicants through the development of new ocean uses.<sup>91</sup> The plan was developed by the State Ocean Caucus, an interagency team that included representatives from Washington Sea Grant and several state agencies.<sup>92</sup> As part of Washington’s Coastal Zone Management Program (CZMP), the MSP allows the state government to review federal actions that have reasonably foreseeable effects on Washington’s coastal resources.<sup>93</sup>

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<sup>87</sup> See Statewide Planning Goal 19: Ocean Resources, <https://www.oregon.gov/lcd/OP/Documents/goal19.pdf>.

<sup>88</sup> *Id.*

<sup>89</sup> *Id.*

<sup>90</sup> See *Oregon Offshore Wind Mapping Tool*, OREGON OCEAN INFORMATION, <https://www.oregonocean.info/index.php/boem-oregon-task-force/134-oregon-offshore-wind-mapping-tool> (last visited Jan. 21, 2022).

<sup>91</sup> See Washington Dep’t of Ecology, *Washington Marine Spatial Plan 20 (2017)*, <https://apps.ecology.wa.gov/publications/documents/1706027.pdf> [hereinafter MSP]. The State Ocean Caucus led the planning process. The Caucus is an interagency team consisting of representatives from the Washington Departments of Ecology, Natural Resources, and Fish and Wildlife; the Washington Governor’s office; the Washington State Parks and Recreation Commission; and Washington Sea Grant. *Id.* at 1-2.

<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

Similar to Oregon’s “Ocean Stewardship Area,” Washington’s MSP identifies a “Study Area” that extends thirty-five to fifty-five nm offshore and begins by mapping patterns of existing uses to show which areas of the Washington coast accommodate the most uses.<sup>94</sup> The plan then shifts its focus to preparation for new ocean uses, mostly offshore renewable energy projects and aquaculture.<sup>95</sup> Notably, the review standards and siting requirements for facility development closely resemble those of the Oregon plan.<sup>96</sup> In addition to those requirements, the MSP also introduced two enforceable policies to bolster Washington’s federal consistency review of new ocean use. The first, the Important, Sensitive and Unique areas (ISUs) Protection Standards, designates a list of ISUs that are afforded increased protection from adverse effects to those areas.<sup>97</sup> The second, the Fisheries Protection Standard, provides that any new use must minimize its negative impact on fishing.<sup>98</sup> Because the CZMA requires that federal activities remain consistent with the enforceable policies of the state’s CZMP, the MSP’s inclusion of these policies provides Washington with additional tools with which to regulate development outside state waters.

A large portion of the MSP is dedicated to detailing the latest data on coastal uses and resources and provides an in-depth analysis of the current condition of the Washington coast’s water quality, wildlife, coastal erosion, marine ecosystems, native and traditional uses, and transportation and commerce.<sup>99</sup> Based on predicted trends, the plan then provides recommendations for protecting and preserving existing sustainable uses, maintaining maritime communities, conserving marine ecosystems, developing an integrated decision-making model for spatial planning, and encouraging sustainable economic development.<sup>100</sup> For example, using data from the National Centers for Coastal Ocean Science at NOAA, the spatial analyses chapter includes modeling of seabird and marine mammal population distributions and migration patterns.<sup>101</sup> Those models can then be overlaid with other maps in the MSP to show where certain proposed uses would likely conflict with migration patterns or sensitive habitats. Developers (in partnership with BOEM) can then identify the areas with the least amount of conflict, create plans for those areas, and then submit their proposal to the state. Interestingly, Washington opted not to identify low conflict areas in the MSP, instead providing data that allows developers to make that determination. Because of this arrangement, Washington can remain non-committal regarding development in particular areas, allowing it to wield its influence more flexibly than if it had identified areas for development.<sup>102</sup>

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<sup>94</sup> *Id.* at 16.

<sup>95</sup> *See id.*

<sup>96</sup> *See id.* at 415; *see* ORMP, *supra* note 57, at 27. Washington’s review process employs the same layered approach, requiring a review standards evaluation, followed by construction and operation plans, all of which call for the same information as Oregon’s requirements. *Compare* MSP, *supra* note 91, at 415, *with* ORMP, *supra* note 57, at 27.

<sup>97</sup> *See* MSP, *supra* note 91, at 559.

<sup>98</sup> *See id.* at 560.

<sup>99</sup> *See id.*

<sup>100</sup> *See id.*

<sup>101</sup> *See id.* at 336-347.

<sup>102</sup> Telephone interview with Casey Dennehy, Marine Policy Associate, Wash. Dept. of Ecology (Jan. 10, 2022). As part of the MSP’s spatial analysis, Washington ran thousands of simulations, but could not identify any areas that didn’t at least partially conflict with a high intensity use like fishing. *Id.*

### III. THE VIRGINIA CONTEXT

Despite the Chesapeake Bay comprising most of its coastal waters, Virginia maintains an important relationship with the ocean, and its territory encompasses a considerable amount of ocean waters. Virginia's offshore waters host many uses, both recreational and commercial, such as fishing, shipping, and aquaculture. Coordinating those sometimes-competing uses can be challenging. At the same time, Virginia also has a strong interest in maintaining a healthy ocean ecosystem, both to support uses like fishing, and to protect its ocean wildlife. A state ocean plan can help to meet both interests, encouraging development and use of the ocean in a way that does not stymie conservation efforts.

The origins of Virginia's ocean planning history can be traced back to 2008, when CZM Programs in the Mid-Atlantic formed a Governor's Agreement on Ocean Conservation, which it signed on to in 2009.<sup>103</sup> Next, President Obama signed the National Ocean Policy (NOP) into law via executive order.<sup>104</sup> Implementation of the NOP was delegated to the National Ocean Council (NOC), which was tasked with ensuring federal agency participation in regional ocean planning efforts through the creation of Regional Planning Bodies.<sup>105</sup> In 2013, the NOC published the National Ocean Planning Implementation Plan and the Marine Planning Handbook, both of which provide regional actors with recommendations for developing ocean plans.<sup>106</sup> Using these recommendations, the Mid-Atlantic Regional Planning Body created the Mid-Atlantic Ocean Action Plan, which received federal approval in 2016.<sup>107</sup> The plan's stated goal was "to improve communication and collaboration among Federal, State and Tribal management entities . . . facilitate the transition to a more systems-based approach to ocean management . . . promote ecosystem health . . . and plan and provide for existing and emerging ocean uses in a sustainable manner."<sup>108</sup> However, a 2018 executive order declared that federal agencies were no longer mandated to enforce regional plans.<sup>109</sup> Although a subsequent regional body, the Mid-Atlantic Committee on the Ocean (MACO) that includes federal agencies and tribes, has been established by MARCO to address Mid-Atlantic ocean management, Virginia can also develop a state-specific plan to address its specific ocean management priorities.<sup>110</sup> A state-specific plan that features regional cooperation would give Virginia more autonomy and flexibility over its ocean planning efforts, while also maintaining its Mid-Atlantic partnerships.

Though federal agencies are no longer required to adhere to the Mid-Atlantic Ocean Action Plan of 2016, it can serve—in conjunction with MACO—as a useful reference for Virginia as the

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<sup>103</sup> *Mid-Atlantic Governors' Agreement on Ocean Conservation*, <http://midatlanticocean.org/wp-content/uploads/2013/11/MidAtlantic-Governors-Agreement.pdf> (last visited Feb. 9, 2022).

<sup>104</sup> Exec. Order No. 13,547, 75 C.F.R. § 43021 (2010), <https://www.federalregister.gov/documents/2010/07/22/2010-18169/stewardship-of-the-ocean-our-coasts-and-the-great-lakes>.

<sup>105</sup> *Id.*

<sup>106</sup> MARCO Plan, *supra* note 1.

<sup>107</sup> *Id.* at 12.

<sup>108</sup> *Id.*

<sup>109</sup> Exec. Order No. 13,840, 83 C.F.R. § 29431 (2018), <https://www.federalregister.gov/documents/2018/06/22/2018-13640/ocean-policy-to-advance-the-economic-security-and-environmental-interests-of-the-united-states>.

<sup>110</sup> *Mid-Atlantic Committee on the Ocean*, MARCO, <https://www.midatlanticocean.org/ocean-planning/mid-atlantic-committee-on-the-ocean/> (last visited Nov. 17, 2021).

state constructs its own plan. For example, even though the Virginia Ocean Plan will be state-specific, close collaboration with Virginia's neighbors, most prominently Maryland and North Carolina, will be vital to the plan's success. Through a collaborative approach, Virginia and its neighbors can pool resources and more effectively tackle issues that transcend state boundaries, like marine habitat protection and offshore wind development. Because the Mid-Atlantic Ocean Action Plan contains a blueprint for interjurisdictional cooperation in the region—including tribal involvement—Virginia may want to adopt and build on that guidance.<sup>111</sup> The plan also identifies many of Virginia's ocean management priorities, such as renewable energy, port and shipping management, military use, commercial and recreational fishing, aquaculture, and ocean health.<sup>112</sup> The Virginia Ocean Plan will likewise need to address these issues, meaning that as the Virginia Ocean Planning Committee works towards creating a comprehensive, adaptively managed ocean plan, the MARCO plan can be provide a helpful launching point.

A Virginia Ocean Plan could help prioritize and foster the state's priorities and energy goals. For instance, it could facilitate increased offshore wind development projects, which in turn could foster the Commonwealth's transition to renewable energy in a way that least impacts its natural resources, and the country's national security and defense mission readiness.<sup>113</sup> Virginia's 2020 Clean Economy Act requires that the Commonwealth's energy providers produce electricity from 100 percent renewable sources by 2050.<sup>114</sup> As the first state to undertake building an offshore wind farm in federal waters, it is important that Virginia implement an effective offshore renewable energy strategy that is in sync with its other ocean management objectives.<sup>115</sup>

The Plan could also proactively address emerging environmental threats to the state's coastline. Ocean acidification and hypoxia are emerging ocean health impacts that are only starting to affect Virginia's waters and aquaculture. Virginia can borrow significantly from West Coast states that are currently dealing with much higher levels of ocean acidification than those on the Atlantic coast.<sup>116</sup> Ocean acidification occurs when the pH level of seawater is reduced for an extended period, primarily due to carbon dioxide uptake.<sup>117</sup> A more acidic ocean is chemically corrosive to shellfish, making it more difficult for them to form shells and skeletons.<sup>118</sup> Ocean acidification's damage to Pacific shellfish harvests has made this issue a top priority for West Coast states.<sup>119</sup> Because Atlantic acidification levels are projected to increase in the coming decades, and because Virginia values its shellfish industry so highly, a forward-thinking Virginia Ocean Plan would adopt the mitigation and adaptation strategies being deployed in Oregon,

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<sup>111</sup> See MARCO Plan, *supra* note 1.

<sup>112</sup> *Id.*

<sup>113</sup> The Norfolk Naval Station is the world's largest naval base and is responsible for the operational readiness of the US Atlantic Fleet. See *About, NAVAL STATION NORFOLK*, [https://www.cnic.navy.mil/regions/cnrma/installations/ns\\_norfolk.html](https://www.cnic.navy.mil/regions/cnrma/installations/ns_norfolk.html) (last visited Jan. 11, 2022).

<sup>114</sup> Va. Code Ann. § 56-585.5 (2021), <https://law.lis.virginia.gov/vacodeupdates/title56/section56-585.5/#:~:text=Utility%20Regulation%20Act-.%C2%A7%2056%2D585.5.,renewable%20and%20zero%20carbon%20sources>.

<sup>115</sup> *About Coastal Virginia Offshore Wind*, COASTAL VIRGINIA OFFSHORE WIND, <https://coastalvawind.com/about-offshore-wind.aspx> (last visited Nov. 17, 2021).

<sup>116</sup> See Washington State Blue Ribbon Panel on Ocean Acidification, *Ocean Acidification: From Knowledge to Action* (2012), <https://apps.ecology.wa.gov/publications/documents/1201015.pdf>.

<sup>117</sup> *Id.* at xi. pH levels measure the acidity of water. *Id.* at app. 4.

<sup>118</sup> *Id.* at xiii.

<sup>119</sup> *Id.* at xii.



Washington, and California.<sup>120</sup> The West Coast states also possess well-established marine habitat reserve and conservation programs that Virginia could model its own after.<sup>121</sup>

Renewable energy, ocean conservation and ocean acidification are just a few of the priorities that a Virginia Ocean Plan can cover. In addition to those listed above, a Virginia Ocean Plan could also address sand mining, non-extractive recreational uses, public access, shifting species, port development and expansion needs and temperature changes, amongst others. An extensive list of current priorities will be critical to the ocean plan's initial success, but its longevity will likely be determined by its adaptability. The plan should therefore incorporate adaptive management principles to enable regulators to proactively deal with emerging concerns. The next section elaborates on this suggestion and provides recommendations based on the strengths and weaknesses of other state ocean plans.

### III. RECOMMENDATIONS FOR VIRGINIA

#### A. Public Input

A primary concern for developing an ocean plan is input from the public and stakeholders potentially affected by the plan.<sup>122</sup> For this reason, public input is critical to the success of proposed regulations, and the states analyzed in this white paper all realized that and included public input. Virginia's Ocean plan can also benefit greatly by allowing stakeholders to have a voice during as many phases of this project as possible. In the Massachusetts, South Carolina, and North Carolina all solicited public input, and included summaries, or transcriptions, of public comments in their reports.<sup>123</sup> The current proposal for creating the Virginia Ocean Plan includes the intention to garner stakeholder/public input and this should be maximized as much as possible to increase the legitimacy of the plan.<sup>124</sup> Like North Carolina, the Virginia group would be best served by spreading out meetings with public involvement geographically, or virtually, in areas with potentially impacted residents to maximize public input, as COVID restrictions allow.<sup>125</sup> "Public participation is not simply a nice or necessary thing to do; it actually results in better outcomes and better governance."<sup>126</sup>

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<sup>120</sup> See Julia A. Ekstrom, et al., *Vulnerability and Adaptation of US Shellfisheries to Ocean Acidification*, 5 NATURE CLIMATE CHANGE 207, 214 (2015), [https://www.researchgate.net/publication/272923440\\_Vulnerability\\_and\\_adaptation\\_of\\_US\\_shellfisheries\\_to\\_ocean\\_acidification](https://www.researchgate.net/publication/272923440_Vulnerability_and_adaptation_of_US_shellfisheries_to_ocean_acidification).

<sup>121</sup> See ORMP, *supra* note 57, at 51-55.

<sup>122</sup> Paul Burstein, *The Impact of Public Opinion on Public Policy: A Review and an Agenda*, 56 POL. RSCH. Q. 29 (2003), <https://doi.org/10.2307/3219881>.

<sup>123</sup> COASTAL ZONE MANAGEMENT OCEAN MANAGEMENT PROGRAM, REVIEW OF THE MASSACHUSETTS OCEAN MANAGEMENT PLAN 44-48 (2014), <https://www.mass.gov/files/documents/2016/08/xp/ma-ocean-plan-review.pdf>; SC OCEAN REPORT, *supra* note 32, at 165-75; NC OCEAN STRATEGY, *supra* note 43, at 69-84.

<sup>124</sup> Agenda of the Virginia Coastal Zone Management Program, Developing a Virginia Ocean Plan (Oct. 21, 2021).

<sup>125</sup> NC OCEAN STRATEGY, *supra* note 43, at 69-84.

<sup>126</sup> *Public Participation Guide: Introduction to Public Participation*, EPA, <https://www.epa.gov/international-cooperation/public-participation-guide-introduction-public-participation> (last updated July 12, 2021).

## B. Adaptive Management

To account for the emergence of new uses and unforeseen environmental issues, Virginia should incorporate into its ocean plan adaptive management principles that allow the plan to maintain long term effectiveness. Massachusetts has incorporated into its plan a five-year review period to keep their ocean plan an evolving document.<sup>127</sup> This review requirement can help the state adapt its plan to new science and new techniques in ocean management, or, if included, even update a fee structure in the plan to account for inflation.<sup>128</sup> Washington's MSP states that the plan will "develop an integrated decision-making process which supports proactive, adaptive, and efficient spatial planning."<sup>129</sup> It also features a monitoring system, run by an interagency team, that is designed to periodically revisit certain scientific indicators and determine whether the indicators suggest a need for change, as well as identify any data gaps that need to be studied.<sup>130</sup> In this way, the extensive data collection that undergirds Washington's MSP helps to ensure that the plan remains adaptive. To maintain communication among the different parties administering the plan, Washington charged its State Ocean Caucus with facilitating communication between state and federal agencies.<sup>131</sup>

Because continued communication is important to maintaining a plan this is both proactive and responsive, Virginia should similarly delegate communication duties to an interagency body as well as continue to use its representation in MARCO's Mid-Atlantic Committee on the Ocean to communicate with federal agencies and neighboring states. Virginia should also continue to prioritize data collection as it has through its membership in MARCO and include a monitoring system to ensure that the Virginia plan does not stagnate or become out-of-date.

## C. Traditional Ecological Knowledge

Traditional ecological knowledge (TEK) refers to the unique understanding of the environment that indigenous communities and local peoples typically possess, as well as the insights that their perspective can provide.<sup>132</sup> By including TEK in its ocean plan, an ocean planning committee gives the state access to historical knowledge that may long predate its founding, a resource that any planning committee would be remiss to disregard. Washington's Marine Spatial Plan includes a section dedicated to TEK, in which the different tribes that were included in the ocean planning effort, all of which are federally recognized, explain the cultural significance of the ocean and its resources to them, as well as the natural resources management strategies that the tribes have used over time.<sup>133</sup> While that section provides helpful context for the reader, it appears that Washington's substantive incorporation of TEK into the plan was limited to

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<sup>127</sup> MASS. GEN. LAWS ch. 21A, §4C (2008).

<sup>128</sup> 301 MASS. CODE REGS. 28.07 (4) (2008).

<sup>129</sup> MSP, *supra* note 91, at 27.

<sup>130</sup> *Id.* at 401.

<sup>131</sup> Telephone interview with Casey Dennehy, Marine Policy Associate, Wash. Dept. of Ecology (Jan. 10).

<sup>132</sup> TEK is "knowledge, practice, and belief concerning the relationship of living beings to one another and to the physical environment, which is held by peoples in relatively nontechnological societies with a direct dependence upon local resources." Robin Wall Kimmerer, *Weaving Traditional Ecological Knowledge into Biological Education: A Call to Action*, 52 (5) *BioScience* 432 (2002), [https://doi.org/10.1641/0006-3568\(2002\)052\[0432:WTEKIB\]2.0.CO;2](https://doi.org/10.1641/0006-3568(2002)052[0432:WTEKIB]2.0.CO;2).

<sup>133</sup> MSP, *supra* note 91, at 37-39.

the input that tribal leaders had in the planning process.<sup>134</sup> According to the plan, tribal staff participated in workshops, meetings, and forums; reviewed and provided input on planning priorities; provided technical and scientific information and feedback; and partnered with state agencies on data collection and field work.<sup>135</sup> Virginia could replicate that model, but would need to identify tribes that have a relationship with the ocean, a process that was easier for Washington because many of its tribes are located on the coast. Virginia should also recognize that some tribes may not be willing to share their TEK with state planners.

## D. Revenue

The Plan should also identify a revenue source to fund its goals and implementation. Funding is also necessary to complete reviews of the plan, proposed restorative work in Commonwealth waters, or any other work deemed necessary to implement the goals identified by the plan. The fee structure in the Massachusetts 2015 Plan requires commercial projects that desire to use state ocean resources to pay a fee.<sup>136</sup> This is a great revenue source for Massachusetts and has raised over one million dollars since their initial plan was released in 2009.<sup>137</sup> The draft revision of the Massachusetts plan for 2021 specifically aimed to update the fee structure to account for inflation.<sup>138</sup> One of the concerns that is commonly raised in response to ocean plans is the need for funding to implement their specific goals, and for enforcement.<sup>139</sup> Implementation of a fee structure like that in Massachusetts could provide a means for Virginia to cover the expenses of personnel or research necessary for implementation and regulation of its Ocean Plan, or it could be used for restoration projects to help revive or maintain ocean resources as Massachusetts does with the revenue from its fee.<sup>140</sup>

## E. Virginia Agency Collaboration

The Virginia CZMP, which is undertaking the efforts to create the Virginia Ocean Plan, is a networked program.<sup>141</sup> If the Virginia Ocean Plan features the same agencies that currently participate in the networked Program or any others, then collaboration among these agencies will play a major role in ensuring the success of the plan. The coordination also could involve public-private partnership on some projects, which provides for non-governmental funding sources and

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<sup>134</sup> *See id.*

<sup>135</sup> *Id.* at 32.

<sup>136</sup> MASSACHUSETTS 2015 PLAN, *supra* note 3, at 3-(4-7). This is predominantly aimed at offshore energy generation and cable laying. It specifically excludes commercial and recreational fishing from the fee structure. *Id.*

<sup>137</sup> The Massachusetts plan has raised over \$1M thus far. Mass. Off. of Coastal Zone Mgmt., *Ocean Resources and Waterways Trust Fund Deposits and Expenditures*, MASS.GOV, <https://www.mass.gov/service-details/ocean-resources-and-waterways-trust-fund-deposits-and-expenditures> (last visited May, 9, 2022).

<sup>138</sup> 2021 DRAFT REVISION, *supra* note 11, at 10.

<sup>139</sup> *See, e.g.*, NC OCEAN STRATEGY, *supra* note 43, at 69-84.

<sup>140</sup> MASSACHUSETTS 2015 PLAN, *supra* note 3, at Appendix 7-3.

<sup>141</sup> *Coastal Zone Management Programs*, NOAA OFFICE FOR COASTAL MANAGEMENT, <https://coast.noaa.gov/czm/mystate/#virginia> (last updated Nov. 18, 2021). The networked CZMP in Virginia is led by staff housed in the Department of Environmental Quality and also includes the departments of: Conservation and Recreation (DCR); Wildlife Resources (DWR); Health; Agriculture and Consumer Affairs; Forestry; Historic Resources; Energy; Transportation; Virginia Economic Development Partnership; Marine Resources Commission (MRC); and the Virginia Institute of Marine Science. Va. Dep't of Env't Quality, *Coastal Zone Management*, DEQ, <https://www.deq.virginia.gov/coasts/coastal-zone-management> (last visited May 9, 2022).

better private-sector representation in the planned actions. Oregon, Washington, and New York have all used public private partnerships, leading to successful studies and collaborations that advance the goals of their plans.<sup>142</sup> Public-private partnerships might not be appropriate for every situation, they have been criticized for decreasing accountability and public control over projects, but they provide another tool that Virginia could deploy in certain circumstances. Additionally, Virginia could create a new state agency to handle the implementation of the Virginia Ocean Plan as Massachusetts did.<sup>143</sup> However, this approach is likely not preferable, as the funding and political will to create such an agency would likely be hard to find.

## F. Regional Collaboration

Interstate cooperation will also be crucial to the success of Virginia's ocean plan. Broader goals of a future Virginia Ocean Plan will be more challenging to achieve without regional collaboration as many potential important features of the plan do not adhere to political boundaries, such as ocean dwelling species or power cables. However, Virginia's participation in MARCO and MACO along with Maryland, Delaware, New Jersey, New York, and many federal agencies provides a sound foundation for regional collaboration. Virginia should also work with North Carolina and consider efforts being undertaken through the MOU signed by North Carolina, Virginia and Maryland to promote offshore wind.<sup>144</sup> Further, the Chesapeake Bay Commission, which is a successful collaborative effort between Virginia, Maryland, and Pennsylvania to "restore the Bay watershed," might provide a template for a similar regional cooperation on these ocean issues.<sup>145</sup> The lessons in regional cooperation learned from inclusion in these groups are important to bring to the Virginia Ocean Plan and will strengthen any plan produced.

## G. Plan Cohesion

Instead of a piecemeal approach, Virginia, through its NOAA-approved Section 309 strategy to develop a Virginia Ocean Plan, has already put in place in the concept of a comprehensive approach to ocean planning. The experiences of Oregon and Washington highlight why this approach is a good one. Because Oregon began its ocean planning efforts several decades ago, the original plans are very broad and somewhat shallow compared with more recent efforts, acting more as a set of general recommendations than as enforceable regulations. Oregon has since built upon those recommendations, fleshing out the original plan with addenda that contain specific regulations. While Oregon's plan has proven to be effective, the piecemeal way in which it came together means that there is sometimes a lack of continuity between documents, and different parts of the plan are located on different websites, making it less accessible and harder to digest than others. Virginia could follow Washington's lead instead, which has more explicitly and cohesively addressed planning in its offshore study area. While Oregon's ocean planning components are spread out among different agencies and programs, Washington's MSP features all the state's marine spatial planning in one document. Virginia should consider replicating the comprehensive,

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<sup>142</sup> *Summary of Actions in NY Ocean Action Plan*, *supra* note 29.

<sup>143</sup> MASS. GEN. LAWS ch. 21A, §4C (2008).

<sup>144</sup> Dave Kovaleski, *Maryland, Virginia, and North Carolina form Partnership to Develop Offshore Wind*, DAILY ENERGY INSIDER (Nov. 2, 2020), <https://dailyenergyinsider.com/news/27769-maryland-virginia-and-north-carolina-form-partnership-to-develop-offshore-wind/>.

<sup>145</sup> *About Us*, CHESAPEAKE BAY COMMISSION, <https://www.chesbay.us/about> (last visited Nov. 18, 2021).

data-intensive style of the Washington MSP, and the designation of an offshore area in the vein of Oregon's Ocean Stewardship Area and Washington's Study Area to facilitate data collection.

#### **IV. CONCLUSION**

States have taken different approaches to ocean planning, driven by their diverse natural resources and priorities. By identifying the relative strengths and weaknesses of other states' planning processes, Virginia can learn from their experiences. Though Virginia possesses its own unique set of priorities and considerations, understanding the strategies pursued by other states will help the drafters of a Virginia Ocean Plan to identify a desirable approach for the Commonwealth while avoiding common mistakes. A Virginia Ocean Plan should, at a minimum, feature public input, adaptive management, traditional ecologic knowledge and consultation with tribes, a stable revenue source for plan maintenance and implementation, state agency collaboration, regional collaboration on issues that transcend state boundaries, and a single, cohesive plan as its output. If the Virginia Ocean Plan includes at a minimum the above recommendations, adapted to Virginia's needs, the resultant plan will be a comprehensive and sustainable path to the future for Virginia's ocean resources.

## Appendix – Recommended Ocean Planning Topics

The following is an inexhaustive list of potential topics for inclusion in a comprehensive Virginia Ocean Plan:

- Offshore energy: Virginia is already moving ahead with offshore wind energy development, and the plan could provide a regulatory framework for that and other facility development such as wave and tidal energy.<sup>146</sup>
- Ocean acidification: The plan could include ocean acidification mitigation measures in preparation for the projected rise in acidification levels in the coming decades.<sup>147</sup>
- Fisheries management: The Virginia plan could include a section that guides in designating areas or providing criteria for commercial and recreational fishing zones.
- Military use: The large military presence in Virginia necessitates a section of the plan that designates ocean areas for certain military use and coordinates the location of those use areas with commercial and recreational uses like shipping and fishing to ensure the military's security concerns are accounted for.<sup>148</sup>
- Port Management: The plan could address Virginia's busy ports, which play an integral role in the Commonwealth's maritime economy.<sup>149</sup>
- Shipping: The plan could account for commercial shipping concerns and explain how shipping lanes will interact with areas designated for other uses.
- Offshore aquaculture: Aquaculture is a major use in Virginia waters and the shellfish industry is a significant stakeholder in any development of Virginia ocean policy.<sup>150</sup> The plan could address invasive species management, climate change challenges related to ocean aquaculture, and development of new aquaculture areas in Virginia's ocean.
- Marine habitat protection: The plan could address the type of marine habitat protection system, if any, that Virginia wishes to pursue. This could include best practices for habitat preservation and information about the populations that currently and historically inhabit Virginia's offshore waters.
- Recreation: Recreational use of Virginia's ocean is important both to local communities and to visitors, as tourism is an important part of the economy.<sup>151</sup> The plan could distinguish between extractive and non-extractive recreational use.

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<sup>146</sup> *Seajacks Opens Operational Base in Virginia Beach*, OEDIGITAL (Feb. 22, 2022),

<https://www.oedigital.com/news/494486-seajacks-opens-operational-base-in-virginia-beach>.

<sup>147</sup> Julia A. Ekstrom et al., *Vulnerability and Adaptation of US Shellfisheries to Ocean Acidification*, 5(3) NATURE CLIMATE CHANGE 207 (2015),

[https://www.researchgate.net/publication/272923440\\_Vulnerability\\_and\\_adaptation\\_of\\_US\\_shellfisheries\\_to\\_ocean\\_acidification](https://www.researchgate.net/publication/272923440_Vulnerability_and_adaptation_of_US_shellfisheries_to_ocean_acidification).

<sup>148</sup> *Virginia Military Bases*, MILBASES, <https://www.milbases.com/virginia> (last updated 2022). Virginia is home to twenty-eight military bases including ten Navy and seven Coast Guard bases. *Id.*

<sup>149</sup> ROY L. PEARSON & K. SCOTT SWAN, *THE FISCAL YEAR 2018 VIRGINIA ECONOMIC IMPACTS OF THE PORT OF VIRGINIA* (2019).

<sup>150</sup> *Shellfish Aquaculture, Farming and Gardening*, VIRGINIA MARINE RESOURCES COMMISSION, [https://www.mrc.virginia.gov/Shellfish\\_Aquaculture.shtm](https://www.mrc.virginia.gov/Shellfish_Aquaculture.shtm) (last visited Mar. 5, 2022).

<sup>151</sup> *Economic Impact of Visitors in Virginia 2020*, TOURISM ECONOMICS (2020) <https://www.vatc.org/wp-content/uploads/2021/09/Virginia-Tourism-Economic-Impact-2020.pdf>. Even under pandemic restrictions tourism in Virginia represented 3.1% of the economy for 2020. *Id.*

- Mining: The plan could provide regulatory guidance for the potential sand, gravel, and other mining operations that could begin in Virginia’s offshore waters and should contain information about the environmental impacts of those practices to determine how to prioritize mining within the network of other uses and conservation objectives.<sup>152</sup>
- Coastal Development: Impacts to the ocean ecosystem from coastal development can be extreme, so the plan could provide guidance on developments and how they may reduce their negative affect on the ocean, such as through outfalls, storm water runoff, or increased nutrient loads.<sup>153</sup>
- Monitoring: A key to successful maintenance of a plan in the long term is through development of tools for baseline monitoring and intensive monitoring of critical concern areas.<sup>154</sup>
- Areas of safety concern: Due to the historical military uses, shipwrecks, and natural hazards, an ocean plan could note areas with safety concerns and mark them for exclusion or avoidance.<sup>155</sup>
- Tribal and cultural significance areas: The plan could contain a section in which tribes can describe their current and/or historical use of offshore waters and provide any Traditional Ecological Knowledge that they wish to share. Areas with historical ties to tribes, or of cultural significance to the state as a whole, may need special protection or mention in the plan.<sup>156</sup>
- Education: Ocean education will aid in connecting the goals of Virginia’s plan to the public and private stakeholders impacted by the plan.<sup>157</sup>

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<sup>152</sup> *Offshore Sand and Heavy Minerals Resources*, VIRGINIA ENERGY, <https://energy.virginia.gov/geology/ocssands.shtml> (last visited Mar. 5, 2022).

<sup>153</sup> *Coastal Development*, OCEAN TRACKS, <https://oceantracks.org/library/human-impacts/coastal-development#:~:text=Coastal%20development%20involves%20activities%20such,coral%20reefs%2C%20and%20seagrass%20beds> (last visited Mar. 5, 2022).

<sup>154</sup> Critical concern areas might include invasive species, cetaceans, impacts from the military, commercial and recreational fishing, or other ocean uses.

<sup>155</sup> *Office of Coast Survey*, NOAA (Dec. 14, 2021), <https://www.charts.noaa.gov/OnLineViewer/12221.shtml>. This could potentially be an easy way to create marine sanctuaries for wildlife if, for instance, an area is known to contain unexploded ordnance such as the cited chart shows off of Mink Island. *Id.*

<sup>156</sup> *Cultural Heritage Marine Protected Areas*, NOAA, <https://marineprotectedareas.noaa.gov/nationalsystem/culturalheritage/> (last visited Mar. 10, 2022).

<sup>157</sup> Shreya Chaudhuri, *There is a Need for Ocean Environmental Education*, PROJECT PLANET (Nov. 15, 2019), <https://projectplanet.world/there-is-a-need-for-ocean-environmental-education/>.