

VIII. Projects of Special Merit (Optional) NA

Ocean Resources Strategy

I. Issue Area(s)

The proposed strategy or implementation activities will support the following high-priority enhancement areas (*check all that apply*):

- | | |
|---|---|
| <input type="checkbox"/> Aquaculture | <input type="checkbox"/> Cumulative and Secondary Impacts |
| <input type="checkbox"/> Energy & Government Facility Siting | <input type="checkbox"/> Wetlands |
| <input type="checkbox"/> Coastal Hazards | <input checked="" type="checkbox"/> Marine Debris |
| <input checked="" type="checkbox"/> Ocean/Great Lakes Resources | <input type="checkbox"/> Public Access |
| <input type="checkbox"/> Special Area Management Planning | |

II. Strategy Description

A. The proposed strategy will lead to, or implement, the following types of program changes (*check all that apply*):

- A change to coastal zone boundaries;
- New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- New or revised local coastal programs and implementing ordinances;
- New or revised coastal land acquisition, management, and restoration programs;
- New or revised special area management plans (SAMP) or plans for areas of particular concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APC; and
- New or revised guidelines, procedures, and policy documents which are normally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government, and other agencies that will result in meaningful improvements in coastal resource management.

B. Strategy Goal:

State the goal of the strategy for the five-year assessment period. The goal should be the specific program change to be achieved or be a statement describing the results of the project with the expectation that achieving the goal would eventually lead to a program change.

Ocean Resources Goal: *Refinement and Adoption of Interjurisdictional Coordination (IJC) Actions for the Mid-Atlantic Ocean Action Plan*

This strategy will strive to improve coordination among ocean users to minimize conflicts and help attain the two goals of the Mid-Atlantic RPB's Framework for Ocean Planning: 1)

to promote a ocean ecosystem health, functionality, and integrity through conservation, protection, enhancement, and restoration and 2) to plan and provide for existing and emerging ocean uses in a sustainable manner that minimizes conflicts, improves effectiveness and regulatory predictability, and supports economic growth. This strategy will address refinement, adoption and implementation of IJC actions outlined in the Mid-Atlantic Ocean Action Plan which is expected to be completed and approved by the National Ocean Council by the end of 2016. IJC actions now in draft form include work among federal agencies, Mid-Atlantic States and tribes to create coordination mechanisms and improve outcomes on issues such as data development and integration, and enhanced regulatory coordination. Ideas for the latter include ensuring federal leasing activities are mutually reinforcing (e.g. Deepwater Port Act, Outer Continental Shelf Lands Act and the CZMA); in-depth reviews of ecologically rich areas and region-wide ecological features to advance protection of ocean habitats; consensus-based authoritative guidance to de-conflict offshore uses such as wind energy, sand management, fishing and transportation; creation of pre-planning mechanisms such as batched consultations for EFH, ESA, NHPA. For fishing in particular, strategies currently under consideration include support of increased dialogue between NOAA and state fisheries managers; collaboration on climate change studies; coordination with the Mid-Atlantic Fisheries Management Council and their Ecosystems and Ocean Planning Committee; improved collaboration with tribes; involving fishermen more directly in ocean planning; investigating ways to strengthen Essential Fish Habitat protections; and workshops to improve understanding of recreational fishing.

Marine Debris Goal: *Development and Adoption of Mid- and Long-Term Actions for the Virginia Marine Debris Reduction Plan*

Through this strategy, stakeholders at the local, state and federal level – including government and non-government organizations – will work together to develop selected mid-term actions in the Virginia Marine Debris Reduction Plan (VMDRP) into implementation strategies. The VMDRP (created in 2012-14) charts a course to measurably reduce marine debris in Mid-Atlantic coastal waters focusing on specific actions (e.g., policies, procedures, outreach campaigns) that are politically, socially, and economically feasible in Virginia that can be accomplished in the near-term, mid-term, and longer-term. Because an estimated 60 to 80% of debris items enter coastal waters from land-based sources, this strategy will include a special focus on Municipal Separate Storm Sewer System (MS4) permittees to facilitate the development and propagation of procedures and policies that will enhance floatable monitoring as well the reduction of litter and marine debris with a focus on visitors to major beaches near urban centers.

- C. Describe the proposed strategy and how the strategy will lead to and/or implement the program changes selected above. If the strategy will only involve implementation activities, briefly describe the program change that has already been adopted, and how the proposed activities will further that program change. (Note that implementation strategies are not to exceed two years.)

Ocean Resources: The Mid-Atlantic Ocean Action Plan will be based on user-vetted data which support regional efforts to improve ocean management priorities. The coordination of input from stakeholders will permit an open dialogue to inform the challenges and opportunities of regional ocean planning. Regulatory processes set forth the structure to ensure single, individual uses comply with a described set of operational boundaries. Bringing those parties together outside of a regulatory structure will allow for more creative and integrated interactions among those users (and regulators) and also permit a broader identification of information gaps that limit the effectiveness of coordination. These data may include resource information regarding important fishing areas, important habitats, energy infrastructure, water quality, adaptation/resilience, navigation and commerce and socioeconomic factors. Expected strategy outcomes may include the integration of new data for the purpose of protecting deepwater canyons, a broadened understanding of the human use interactions, characterizations of marine mammal or other protected species, refined data that reflect vessel traffic in particular areas, improved MARCO Data Portal layers to inform decision making processes and collaborative, consensus-based planning. Additionally, the Commonwealth may assist in the development of improved fish data based on the Northeast Area Monitoring and Assessment Program (NEAMAP) approach which includes fishermen’s perspectives to better depict areas that may or may not be suitable for other human uses. Such data being collected with the help of the fishing industry but operating under consistent quality assurance protocols would provide for credible fisheries and habitat data in areas that may be impacted by future changes in activities. The resultant maps based on these data may indicate which areas should be evaluated for CZMA Federal Consistency purposes. Enforceable actions may include Memoranda of Agreement with the commercial fishing community and the research community to collect and include those data to support their use in ocean planning activities. The Mid-Atlantic Ocean Action Plan may include strategies to: 1) enhance federal notice to states and tribes; 2) help make coastal effects determinations and use the MARCO ocean data portal to help make “causal connections”; 3) create new CZMA federal consistency agreements.

Marine Debris: Just as there are multiple sources of marine debris, this strategy will have multiple approaches and reach multiple targeted audiences. The over-arching goal of the Virginia Marine Debris Reduction Plan is to reduce the amount of trash and marine debris from land-based and water-based sources in Virginia through prevention, interception, innovation, and removal for ecological, social, and economic benefits. Strategies to achieve this will require a coordinated approach that will focus on:

- Influencing individual behaviors and choices that contribute to marine debris problems.
- Fostering collaboration between agencies, local governments, researchers, manufacturers and businesses, non-profits, and citizens.
- Increasing knowledge to better understand sources, fates, impacts, and solutions to marine debris.

- Securing adequate funding to support research, coordination, behavior change campaign development, infrastructure improvements, and grants to local governments.
- Improving regulations, including incentives and disincentives, to prevent pollution.

III. Needs and Gaps Addressed

Identify what priority needs and gaps the strategy addresses and explain why the proposed program change or implementation activities are the most appropriate means to address the priority needs and gaps. This discussion should reference the key findings of the assessment and explain how the strategy addresses those findings.

Ocean: The following draft research needs were identified by the Mid-Atlantic Regional Planning Body⁴¹ but will be further refined as the Ocean Action Plan is developed in winter/spring 2016. Some of these topics could potentially be addressed by this 309 Strategy using the funds set aside each year for data development and decision support tools. Some topics such as coral exploration would likely be too costly.

i. Species and habitats

1. Refinement of methodologies for identifying important ecological areas
2. Coral exploration and reconnaissance work
3. Seabird and marine mammal migratory pathways and populations
4. Expand understanding of biotic/abiotic influences on seabird abundance
5. Quantify impact of nearshore fisheries on bird populations
6. Occurrence and spatial extent of harmful algal blooms
7. Offshore water quality to develop nutrient loading modeling boundary conditions
8. Improved oceanographic data to understand and respond to climate shifts and ocean acidification
9. Determine physical and biological pre and post-construction conditions of sand and gravel borrow areas over time to determine feasibility of reuse and habitat impacts
10. Expansion of NEAMAP surveys to focus on areas identified for renewable and non-renewable offshore energy development

ii. Energy

1. Determine avian collision and avoidance rates associated with marine wind turbines
2. Determine actual (not modeled) wind speeds
3. Identify important areas for commercial fishing effort in and around WEAs

⁴¹ Research topics have been identified by state and federal agencies represented on the Mid-Atlantic RPB. These potential research topics have not been vetted or approved by the full RPB and should not be understood or used to represent the position of the RPB.

4. Determine seismic survey impacts on marine mammals, important fish species and corals
 5. Determine acoustic impacts of wind turbine construction on marine mammals and important fish species
 6. Determine impacts associated with electromagnetic fields on species that use electroreceptors for both prey and navigation
- iii. Adaptation/resilience
1. Understand the potential for offshore features to support coastal resiliency (e.g. the role of sand ridges in wave attenuation) Sea level rise impacts on federal shore side infrastructure and properties and ocean acidification
- iv. Navigation and commerce
1. Update and refine AIS and other navigation data for utility in management
 2. Identify navigation trends to understand traffic patterns over time and identify the necessary shore side improvements in response to post-Panamax shipping.
 3. Develop or add existing layers to the Portal, that depict activities and structures in nearshore and estuarine waters
- v. Socio-economic
1. Navigation and commerce
 2. Recreation
 3. Geographic areas of concentrated use and/or value

Marine Debris:

A previous Section 309 Strategy (2011-2015) led to the planning of the Virginia Marine Debris Summit in 2013 (the first such summit on the East Coast). This Summit was an important first step to identifying the needs and gaps related to marine debris issues in Virginia, and led to the realization by many stakeholders that Virginia needed a plan in place to address the many sources of marine debris. In October 2014, after extensive stakeholder engagement, the Virginia Marine Debris Reduction Plan was published. At the Virginia CZM Program's Coastal Partners Workshop in December 2014, reducing marine debris was determined to be a high priority that should be combined with Ocean Resources in order to better integrate and coordinate efforts with Mid-Atlantic regional ocean planning efforts. Coastal partners agreed that there is an urgent need to move ahead on the recommendations found in the Virginia Marine Debris Reduction Plan. The Phase I (High-Level) Assessment for Marine Debris rated it as a high priority that warrants further in-depth assessment and action. A 2nd Virginia Marine Debris Summit will be held in March 2016 that will help further clarify mid and long term goals.

This strategy calls for the further development and implementation of the Virginia Marine Debris Reduction Plan. This Plan – the first of its kind on the East Coast – addressed previous information gaps in Virginia and identified more than 50 action steps that will lead to reduced marine debris through improved coordination among

state natural resource agencies, local governments, researchers, and NGOs in Virginia. Further, the Virginia Marine Debris Reduction Plan calls for new policies that will support waste minimization of the most common and harmful items found as marine debris (e.g., single-use plastic bags, food and beverage packaging, balloons, cigarette butts, and microplastics).

IV. Benefits to Coastal Management

Discuss the anticipated effect of the strategy, including the scope and value of the strategy, in advancing improvements in the CMP and coastal management, in general.

Ocean:

The completion of a Mid-Atlantic Ocean Plan by 2016 will define the structure necessary to improve coordination among state and federal agencies, tribes and ocean stakeholders. Enhanced coordination is expected to improve efficiencies for coastal and ocean managers by identifying and addressing the most pressing ocean management issues. Clearly defined coordination mechanisms will ensure clearly articulated opportunities and effective outcomes. While MARCO is guided by the Shared Regional Priorities of Climate Change, Renewable Energy, Marine Habitats and Water Quality, the ability to implement those actions and strategies more efficiently will be addressed at the State level as well. Coastal managers now have improved working relationships with Federal partners and the Ocean Sectors through the regional planning process and in some cases developed entirely new working relationships with these partners. Through demonstrated successes and continually evolving activities to build upon those, these new working relationships will permit an increased reliance upon each party for future outcomes.

Marine Debris:

Coordinated reduction of marine debris will have positive impacts on coastal resources, protected species such as marine mammals and migratory birds, and economically important species such as blue crabs. Virginia's coastal communities also spend taxpayer dollars on beach cleanups, litter removal, street sweeping, and other methods to prevent or remove marine debris. This strategy aims to reduce marine debris, thereby also reducing these economic costs to coastal communities. Plastic tarps, abandoned nets and fishing gear, tires, and other debris can smother and crush sensitive ecosystems such as deep sea corals found in the submarine canyons 50 miles off Virginia's coast. Boaters' safety can be compromised when debris items – fishing line, nets, plastic bags, and rope pieces – wrap around boat propellers or clog seawater intakes. Coordinated efforts to reduce marine debris will make significant contributions to Virginia's coastal economy as well as protect natural resources.

In terms of scope, Virginia's work on marine debris issues has led to a leadership role as Virginia collaborates with other Mid-Atlantic states to explore *regional level* projects that MARCO might undertake that focus on one marine debris source and create social

marketing materials that are designed to resonate with the whole region and can be disseminated throughout the whole region.

V. Likelihood of Success

Discuss the likelihood of attaining the strategy goal and program change (if not part of the strategy goal) during the five-year assessment cycle or at a later date. Address the nature and degree of support for pursuing the strategy and the proposed program change and the specific actions the state will undertake to maintain or build future support for achieving and implementing the program change, including education and outreach activities.

Ocean Resources:

The Mid-Atlantic Regional Planning Body is committed to developing an Ocean Action Plan and submitting it to the National Ocean Council for approval by fall of 2016. The Ocean Action Plan will contain geographically and/or region wide specific interjurisdictional coordination (IJC) actions. At the RPB's September 2015 public meeting, it agreed to a multitude of general actions (see the RPB website at <http://www.boem.gov/MidA-RPB-Meetings/>). Those actions are currently being further developed for inclusion in the plan and are expected to be approved by the National Ocean Council by the end of 2016, somewhat concurrent with the beginning of this strategy in October 2016. There will be a Presidential election in the fall of 2016, but even if the next administration is not supportive of regional ocean planning, the Mid-Atlantic States, through MARCO, will continue to work on IJC actions and ocean planning in general to help meet its four shared regional priorities of renewable offshore energy, habitat protection, water quality and climate adaptation. Working with the states and tribes on these issues should still fall well within the duties and authorities of federal agencies so that the state/federal/tribal collaboration should be able to continue. Given MARCO's and Virginia CZM's demonstrated commitment since 2008 to developing and implementing an ocean plan that will lead to protection of ocean health and promotion of sustainable uses, the likelihood of success is high.

Ensuring areas identified for renewable and potentially for future non-renewable energy off Virginia's coast are consistent with state CZM goals will ensure the Commonwealth has an appropriate balance among diverse activities. This must include consideration of traditional and non-traditional, and future water-dependent uses, while preserving critical ecological systems. Identifying and protecting areas identified as ecologically and economically valuable to the Commonwealth and all its stakeholders is the key to long term success of ocean planning.

Marine Debris:

The likelihood of success for the marine debris strategy is high given several factors:

1. The Virginia Marine Debris Reduction Plan is in place, implementation has begun on near-term actions, and initial ideas for developing mid- and long-term actions that would fit in the timeframe of this upcoming 309 cycle are generally agreed upon by the plan's team.

2. The stakeholders who have been engaged in the creation of the Virginia Marine Debris
3. Reduction Plan continue to contribute to its success;
4. Attendees at the Coastal Partner's Meeting in December 2014 agreed on the high priority status of marine debris;
5. The Second Virginia Marine Debris Summit is scheduled to be held in March 2016 at the Virginia Institute of Marine Science (VIMS). The summit will bring together marine debris experts, state and local resource managers, community educators, and potential funding sources (including the NOAA Marine Debris Program) to review the early accomplishments of the Virginia Marine Debris Reduction Plan, share ongoing research, further develop ideas for mid- and long-term actions and explore emerging issues. While focused on Virginia, representatives from other MARCO states and DC will be invited to attend in the hopes of stimulating ongoing regional approaches to marine debris sources, impacts, and mitigation.

Both:

The degree of support for both IJC actions and marine debris reduction is currently very high among most ocean stakeholders. The oil and gas industry remains skeptical about ocean planning as do some fishing communities. The renewable energy, shipping, submarine cable, military, sand management, recreational and environmental NGOs as well as some fishing community reps have shown very strong support for improving ocean management through IJC actions and provision of reliable, accessible data on ocean resources and uses. Nurturing relationships with the commercial fishing industry will increase the long-term support and open dialogue, especially as it relates to data collected that accurately represents the fishing activity and stock. There appears to be widespread public support for marine debris reduction, however that support can often disappear when specific regulations are proposed such as bans on plastic bags and balloon releases, which is why the Virginia CZM Program takes a "social marketing" approach to reducing marine debris. Although it is hoped that after more "outreach" through social marketing, legislative and/or regulatory solutions could gain popular acceptance.

Garnering and maintaining support for ocean planning and marine debris reduction will be through a variety of approaches using the Virginia CZM, MARCO and Mid-Atlantic RPB websites, press releases, public workshops and webinars, and the efforts of the Ocean Stakeholder and Marine Debris Coordinators funded through this strategy.

VI. Strategy Work Plan

Using the template below, provide a general work plan that includes the major steps that will lead toward or achieve a program change or implement a previously achieved program change. If the state intends to fund implementation activities for the proposed program change, describe those in the plan as well. The plan should identify a schedule

for completing the strategy and include major projected milestones (key products, deliverables, activities, and decisions) and budget estimates. If an activity will span two or more years, it can be combined into one entry (i.e., Years 2-3 rather than Year 2 and then Year 3). While the annual milestones are a useful guide to ensure the strategy remains on track, OCM recognizes that they may change somewhat over the course of the five-year strategy unforeseen circumstances. The same holds true for the annual budget estimates. Further detailing and adjustment of annual activities, milestones, and budgets will be determined through the annual cooperative agreement negotiation process.

Strategy Goal: Refinement and Adoption of IJC actions for the Mid-Atlantic Ocean Action Plan

Total Years: 5

Total Budget: \$523,600

Year: 1

Description of activities: The VCU Ocean Stakeholder Coordinator will focus on IJC actions primarily as they relate to fisheries. At the September 2015 Regional Planning Body Meeting, those fisheries actions were generally described as:

- Support dialogue between NOAA and State Fisheries Managers
- Collaborate on climate change studies (science/managers/planners)
- Work with the MAFMC Ecosystems and Ocean Planning Committee
- Improve collaboration with tribes
- Improve understanding of recreational fishing

More specific actions are expected to be developed in winter/spring 2016 for inclusion in the Mid-Atlantic Ocean Action Plan such that a clearer set of policies can be worked on by October 2016 when this first year of Virginia's 309 Strategy commences. A variety of MOUs or interagency agreements are envisioned to ensure stronger consideration of fishermen's knowledge of important fishing areas as well as incorporating their spatial needs into plans for other ocean uses such as shipping, habitat protection, offshore energy, etc. In addition, the Coordinator will continue efforts to ensure that fishing is maximized in and around Virginia's Wind Energy Area. Clearly defined guidance and coordination mechanisms will be identified and developed to ensure collaborative processes are open, transparent and involve the appropriate stakeholders. Consensus-based, collaborative guidance documents will assist in the de-conflicting of offshore uses (examples include: specific guidance on the buffers for navigation and commercial fishing activities in and around offshore energy projects; minimization of migratory mammal impacts and fishing pattern impacts from changes in shipping; reduced user conflicts between uses in general; and improved science-based decision making tools that have benefitted from input and vetting by fishermen.

CZMA federal consistency issues such as enhanced federal notice and making causal connections for coastal effects determinations will also be addressed from the perspective of fisheries.

Major Milestone(s): Clarification of IJC actions regarding fisheries and CZMA federal consistency issues.

Budget: \$60,000 for VCU Stakeholder Coordinator; \$55,000 for data collection or synthesis. Total = \$115,000

Year: 2

Description of activities: Acquisition of data identifying use conflicts between Commercial fishing and Shipping and offshore energy development. Thorough engagement of Commercial fishing industries to assess potential conflicts between gear types, transit and changes in shipping intensity and traffic and semi-permanent structures. Utilizing a consensus-based strategy, coordination with the Commercial fishing industry will focus on the identification of those areas most likely in conflict with current use. Adaptively manage guidance and coordination processes and documents to improve outcomes, address changing local priorities or changing political priorities.

Major Milestone(s): Development of draft maps and management change options for reducing conflicts among fishing and other ocean uses.

Budget: \$60,000 for VCU Stakeholder Coordinator; \$34,600 for data collection or synthesis. Total = \$94,600

Year: 3

Description of activities: Negotiation of resolution(s) between identified use conflicts (such as fixed gear commercial fishing and changes in shipping traffic. A participatory, consensus-based process will be employed to identify possible solutions that may negatively impact associated parties. Outcomes of those resolutions will be negotiated with the appropriate Federal, State and local partners to ensure sustainability to solutions.

Major Milestone(s): Development of final maps and consensus on several potential management change options to reduce conflicts.

Budget: \$60,000 for VCU Stakeholder Coordinator; \$44,600 for data collection or synthesis. Total = \$104,600

Year: 4-5

Description of activities: Re-evaluate the process and guidance set forth in Year 1 to restructure, where necessary. Emerging issues, such as a broadened understanding of the impacts of the Panamax expansion on regional shipping intensity and vessel size, may identify new data gaps and opportunities for work on conflict reduction. Refining these principles will ensure long-term success and sustainability built upon demonstrated successes in previous years. Significant climatic episodes may dramatically adjust priorities and outcomes. Hurricane Sandy was a demonstrated example of local Coastal Manager's re-adjustment of priorities to protect coastal communities that result in changes in sand and gravel extraction, shipping and commerce and commercial fishing priorities.

If federal, state and local governments, private industry and environmental groups all agree, Accomack-Northampton Planning District Commission will build on work conducted with FY12 CZM funds to document the geology of sand movement patterns and the needs of various stakeholders. The overall recommendation of the FY12 project report is that there is strong need to continue a forum for developing a sand management plan for the Chincoteague Inlet area that all stakeholders can live with. However, as of 2015, a great deal of dissension among the parties remains and it is believed that it may take a few years before the local community is prepared to begin work on an Eastern Shore sand management plan. Thus this work is envisioned to be postponed until about FY 18. Attempts will be made to align this state work with the regional sand management IJC actions of the regional Ocean Action Plan.

Major Milestone(s): Finalized maps, plans and agreements for conflict reduction. Development of draft and final plans for sand management in the Chincoteague Inlet area.

Budget: \$120,000 for VCU Stakeholder Coordinator for 2 years; \$29,400 for data collection or synthesis for 2 years; \$60,000 for E. Shore sand management plan for 2 years. Total = \$209,400

Strategy Goal: Development and adoption of Marine Debris Actions for Virginia (and potentially the Mid-Atlantic region)

Total Years: 5

Total Budget: \$300,000

Year: 1

Description of activities: Support ongoing waste source reduction efforts, and facilitate collaboration and the transfer of knowledge about successful marine debris prevention programs, policies, and campaigns through the establishment of a web site and social media site (e.g., Facebook group page). Research and develop arguments (particularly economic ones) that will be compelling to build popular support for legislation and policies that will support waste minimization of the most common items found as marine debris. This research could include the costs incurred by communities, taxpayers, and individuals due to incorrect disposal of trash. Explore existing as well as potential future fee and tax structures in Virginia related to litter and recycling. Engage MS4 permittees and stakeholders in a review of current policies and practices found in MS4 permits regarding litter and debris monitoring, prevention and interception.

Major Milestone(s): Identify opportunities for new or revised policies or procedures that will reduce marine debris at the source.

Budget: \$60,000

Year: 2

Description of activities: Pursue grants to support social marketing campaigns aimed at influencing behaviors that are associated with reducing marine debris. Document and disseminate the economic costs of marine debris on tourism, community cleanup budgets, MS4 compliance, economically important species, and to farmers (e.g., impact of plastic bags on cotton crop values) as well as personal economics (e.g., costs associated with boats that are disabled due to marine debris entanglement). Continue to engage existing statewide groups (e.g., Master Naturalists, counties' litter control staff, etc.) on marine debris awareness and in implementing aspects of the Virginia Marine Debris Reduction Plan. Develop a plan to support increased enforcement of Virginia's current laws (as well as policies) regarding littering, illegal dumping, balloon releases, waste management, and stormwater runoff.

Major Milestone(s): Quantify benefits of reducing land-based litter in select Virginia coastal communities to help demonstrate the value of coordinated marine debris reduction efforts. Explore the potential for stakeholder training that would strengthen the policies and practices written into MS4 permits regarding litter and debris monitoring, prevention and interception.

Budget: \$60,000

Year: 3

Description of activities: 3rd Virginia Marine Debris Summit. Conduct a comprehensive overview of cleanup (removal) efforts. Reassess current priorities to be addressed, and then develop selected actions in the Virginia Marine Debris Reduction Plan into implementation strategies. Since the VMDRP uses an adaptive management approach to continually improve the plan based on a two-year evaluation cycle, the Advisory Committee will meet to evaluate the plan and determine which of the action items in the plan should be fleshed out to develop policies that will lead to the reduction of marine debris.

Major Milestone(s): 3rd Virginia Marine Debris Summit. Evaluation of progress of the VMDRP.

Budget: \$60,000

Year: 4

Description of activities: Further engage the MS4 and stormwater management communities in developing strategies to improve interception infrastructure and assess trash interception practices. This will include an assessment of trash interception practices in MS4 and non-MS4 permitted localities. Analyze existing stormwater management legislation and policies as they relate to litter interception. Pursue grants to support social marketing campaigns aimed at influencing behaviors that are associated with reducing marine debris.

Major Milestone(s): Assessment of trash interception practices and strategy development to improve interception infrastructure in Virginia.

Budget: \$60,000

Year: 5

Description of activities: Promote collaborative research on alternative packaging and innovative product design for commonly littered items. Develop strategies to reduce legal and administrative barriers to 1) adopting alternative materials and practices; and 2) removal of lost or derelict gear and derelict vessels. Since the VMGRP uses an adaptive management approach to continually improve the plan based on a two-year evaluation cycle, the Advisory Committee will meet to evaluate the plan and determine which of the action items in the plan should be fleshed out to develop policies that will lead to the reduction of marine debris.

Major Milestone(s): Develop policies that will lead to the reduction of marine debris and also strategies to reduce legal and administrative barriers. Evaluation of progress of the VMGRP.

Budget: \$60,000

VII. Fiscal and Technical Needs

A. Fiscal Needs: *If 309 funding is not sufficient to carry out the proposed strategy, identify additional funding needs. Provide a brief description of what efforts the CMP has made, if any, to secure additional state funds from the legislature and/or from other sources to support this strategy.*

Ocean Resources:

Regional ocean planning is a massive effort involving multiple federal agencies, states and tribes. These 309 funds along with 306 funding for the CZM Program Manager, are a relatively small part of what is needed to continue the development and implementation of the Mid-Atlantic Ocean Action Plan, but they are critical to Virginia's continued involvement in the process. Ocean plan development had been funded by NOAA until Congressional appropriations were discontinued. Major funding currently comes from the Moore Foundation for continued support of the MARCO staff, the MARCO Ocean Data Portal and support for the RPB Work Groups via facilitation contractors. Reinstatement of Congressional funding is needed.

Marine Debris:

Additional funding will be needed for many aspects of the Virginia Marine Debris Reduction Plan, including derelict fishing gear removal programs and education and outreach campaigns. NOAA's Marine Debris Program's grants are one possible source of funding. Virginia CZM Program's academic and non-profit partners are also likely to seek funding for projects that align with the goals of the Virginia Marine Debris Reduction Plan. Foundations that have supported litter- and marine debris-related work include Keep America Beautiful (Cigarette Litter Prevention Program Grants), Boat U.S. Foundation and the Chesapeake Bay Restoration Fund.

B. Technical Needs: *If the state does not possess the technical knowledge, skills, or equipment to carry out all or part of the proposed strategy, identify these needs. Provide a brief description of what efforts the CMP has made, if any, to obtain the trained personnel or equipment needed (for example, through agreements with other state agencies).*

Ocean Resources:

The Virginia CZM Program has access to many technical experts through its Coastal Policy Team, MARCO and the Mid-Atlantic Regional Planning Body which includes many experts from various federal agencies. Facilitation services will be supplied by the VCU Ocean Stakeholder Coordinator as well as facilitation contractors hired by BOEM and MARCO with other federal funds and Moore Foundation funds. Equipment is generally not needed for ocean planning efforts. The MARCO Ocean Data Portal is the main planning tool for the Mid-Atlantic RPB and Virginia CZM's Coastal GEMS portal is also available as well as the expertise in participatory and other mapping techniques available from the CZM Program's GIS Coordinator. Long term updating and maintenance of the Portal is a high priority need.

Marine Debris:

The Virginia CZM Program has access to many technical experts in Virginia, other MARCO states, and the NOAA Marine Debris Program. Faculty and staff at VIMS, the Virginia Aquarium & Marine Science Center, and Clean Virginia Waterways (CVW) of Longwood University are engaged in innovative research, program development, marine debris monitoring, trend analysis, and education and outreach activities related to derelict fishing gear and consumer waste issues. In addition, the Virginia CZM Program staff and its partners (notably CVW) are strengthening their knowledge and skills in developing and piloting outreach campaigns based on social marketing principles thanks in part to an FY 2014 grant from NOAA's Marine Debris Program.

VIII. Projects of Special Merit (Optional)

If desired, briefly state what projects of special merit the CMP may wish to pursue to augment this strategy. Any activities that are necessary to achieve the program change or that the state intends to support with baseline funding should be included in the strategy above. The information in this section will not be used to evaluate or rank projects of special merit and is simply meant to give CMPs the option to provide additional information if they choose. Project descriptions should be kept very brief (e.g., undertake benthic mapping to provide additional data for ocean management planning). Do not provide detailed project descriptions that would be needed for the funding competition.

For *ocean planning*, we may submit PSM proposals revolving around data gaps, data syntheses and/or decision support tools. As the IJC actions are undertaken, specific data or research needs may arise that exceed the funds budgeted (\$10- 44.7k per year) for data collection or decision tool development.

For marine debris, we may submit PSM proposals revolving around development of specific social marketing campaigns for either Virginia or the Mid-Atlantic region. Such campaigns can cost upwards of \$100,000. Virginia CZM and potentially MARCO will also seek funding from other sources such as NOAA’s Marine Debris Program.

IX. 5-Year Budget Summary for Ocean Strategy

Strategy Title	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	Total Funding
Stakeholder Coordination for Fisheries and Wind IJC Actions	60,000	60,000	60,000	60,000	60,000	300,000
State Forum for Sand IJC Action	0	0	0	30,000	30,000	60,000
Ocean Data Collection and/or Decision Support Tools	55,000	34,600	44,600	14,700	14,700	163,600
Marine Debris Coordinator	60,000	60,000	60,000	60,000	60,000	300,000
Total Funding	175,000	154,600	164,600	164,700	164,700	823,600