

**Virginia Ocean Planning
FY11 Task 95.01
Final Report
(October 1, 2011 to June 30, 2013)
Compiled by
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VCU

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Virginia Coastal Zone
MANAGEMENT PROGRAM



Ocean Spatial Plan

FY11 Task 95.01

Final Report, Grant Period October 1, 2011 to June 30, 2013

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Executive Summary

The VCU Environmental Scientist/Analyst, retained by the Virginia Coastal Zone Management Program, served as the Ocean Planning Stakeholder Coordinator for the grant reporting period under the VACZM Section 309 Ocean Resources Strategy. During this period, the Stakeholder Coordinator worked with the Virginia CZM Program on the Commonwealth's Ocean Planning initiative. This effort included direct assistance to the VA CZM Manager in facilitating the development of a Virginia Ocean Plan for the waters off Virginia's coast in concert with the Mid-Atlantic Regional Council on the Ocean (MARCO) as called for in the July 19, 2010 Final Recommendations of the Interagency Ocean Policy Task Force (IOPTF). The IOPTF's recommendations and the accompanying Presidential Executive Order can be viewed at http://www.whitehouse.gov/files/documents/OPTF_FinalRecs.pdf. Virginia's Ocean Plan will cover the area from mean low water along Virginia's Atlantic coast out to the 200 mile Exclusive Economic Zone.

In addition, Virginia began the development of a Virginia Marine Debris Management Plan, with discussion of key marine debris issues and initiated a Marine Debris Summit. Ultimately, the Plan will be presented to the Virginia Coastal Policy Team for adoption and to MARCO for consideration. Decreasing marine debris is one of the goals within MARCO's set of "Water Quality" goals.

Ocean planning in the Commonwealth is a partnership with MARCO, which includes representatives from the States of New York, New Jersey, Delaware, Maryland and Virginia. The broader MARCO effort is being supported through a NOAA Regional Ocean Partnership Cooperative Agreement with the "Monmouth Team" which includes Monmouth University, University of Delaware, Rutgers University, The Nature Conservancy, and NatureServe. Primarily, ocean planning brings together the sectors of Ports and Navigation, Military, Commercial Fisheries, Recreational Users, Offshore Energy, Conservation, Tourism, and Local Government. These sectors have been brought together both in the Commonwealth as well as in the region to share information regarding ocean uses for the purpose of understanding the complexity of overlapping and abutting uses.

This grant funded the VCU Environmental Scientist, (Ocean Planning Stakeholder Coordinator) to cover several activities:

- Support the VA CZM Manager for MARCO and Ocean Planning activities
- Ocean stakeholder identification, coordination and meeting coordination
- Initiate the development of a Marine Debris Management Plan by coordinating and conducting a Marine Debris Summit (including: planning team coordination, group process design and meeting facilitation)

Project Management and Implementation

The VCU Ocean Stakeholder and Marine Debris Plan Coordinator maintained an office on the VCU campus and directly supported the Virginia CZM Program Manager in many aspects of MARCO and the Ocean Planning activities in the Commonwealth. Significant focus was on the identification of Virginia offshore marine stakeholders/users based upon the December, 2009 MARCO Stakeholder Workshop which was held in NYC and the initiation of the development of the Marine Debris Management Plan (MDMP). The Environmental Scientist participated in the regular weekly MARCO calls, subcommittees and attended the MARCO Management Board meetings in both Baltimore, MD and Cape Charles, VA. Details of the ocean planning efforts can be found at:

<http://www.deq.state.va.us/Programs/CoastalZoneManagement/CZMIssuesInitiatives/OceanPlanning/VirginiaOceanPlanning.aspx>

Additionally, the Stakeholder Coordinator worked with the CZM Director and other partners such as the Accomack-Northampton Planning District Commission to develop a database of stakeholders to access to inform the ocean planning efforts. The Virginia database of ocean stakeholders can be found in the Appendix of this report.

Early in the project period, the Environmental Analyst was invited to attend the Monmouth Team kickoff meeting, held at Rutgers University, New Brunswick, NJ (Jan 4-6, 2012). This meeting was to gain an understanding of the upcoming support role the Monmouth Project team (which includes, Monmouth University, Rutgers, University of Delaware and The Nature Conservancy) would be providing to the MARCO efforts in the region including stakeholder engagement and the enhancement of MARCO's ocean data portal.

In preparation for the upcoming ocean planning efforts, the Stakeholder Coordinator worked with a MARCO subcommittee to craft language to advertise for the outreach events. The focus was to clearly define MARCO and Ocean Planning in the region. The following represents the language developed and used in the shared materials.

What is MARCO: The Mid-Atlantic Regional Council on the Ocean (MARCO) was created by the Governors of New York, New Jersey, Delaware, Maryland and Virginia in 2009 to collaboratively address regional ocean priorities and to improve the health of our ocean and coastal resources. MARCO's efforts to improve the health of the region's ocean and coastal resources will help ensure high quality of life and economic vitality of our region's communities well into the future.

The Governors of Delaware, Maryland, New Jersey, New York, and Virginia have agreed to work collaboratively and share a common voice to better manage the region's ocean resources. MARCO is focused on the following shared priorities:

- Support the sustainable development of renewable energy in offshore areas to make the Mid-Atlantic more self-reliant and economically stable
- Protect important offshore habitats that are critical to sustaining seafood and tourism, and providing other job-creating benefits
- Prepare communities for regional climate change impacts to minimize negative economic impacts.
- Improve the region's water quality to sustain seafood and tourism.

- Build capacity for comprehensive regional offshore planning that will help maximize our Mid-Atlantic economy and our ocean's ecological health

What is MARCO Doing:

MARCO has created an online mapping and planning tool (http://www.midatlanticocean.org/map_portal.htm). The Portal displays mapping information of the wide range of marine resources and uses and helps identify compatible uses.

What is Ocean Planning:

Healthy oceans depend on smart planning. Ocean planning is necessary to understand the current marine uses and natural resources to develop a shared vision of how the region may use them in the future. Ocean planning is a practical, rational organization and display of the use of marine space and the interactions between its uses and sets a vision for the future to balance the demands for development and protection of marine ecosystems.

During the reporting period, the Analyst assisted in the coordination, development and meeting facilitation of the Virginia Ocean Planning kickoff meeting held in June, 2012. This meeting included representatives from the previously mentioned sectors, but with significant focus on Virginia-based issues. The overall intent of this meeting was to begin ocean planning discussions in Virginia, share the status of MARCO and unveil a new mapping participatory tool that would be used in upcoming mapping workshops. Specifically, meeting notes can be found at:

http://www.deq.state.va.us/Portals/0/DEQ/CoastalZoneManagement/Virginia_Ocean_Planning_Stakeholders_June_2012_Meeting_Summary.pdf

This meeting also provided an opportunity to directly communicate with attendees about the upcoming Eastern Shore Participatory GIS (PGIS) Recreational User Workshop (July 10-11, 2012). This workshop invited recreational users from the Tidewater and Eastern Shore areas to participate in a mapping exercise to identify the areas important to them. Over 20 uses were explored and mapped during this session including: recreational fishing from a boat, spear fishing, kayaking, shore use, charter wildlife viewing divided into the categories of Boating for Hire, Recreational Fishing/Hunting, General Recreational Non-consumptive and Cultural. The advertised flyer can be seen at:

http://www.deq.state.va.us/Portals/0/DEQ/CoastalZoneManagement/Ocean_Recreational_Use_Participatory_GIS_Workshop_Flyer.pdf

This mapping exercise produced a series of maps solely based on the input from the participants. Participants were requested to provide generalized information as opposed to point specific details to protect the resources and provide anonymity. The data was identified using two categories: General Use Footprint and Dominant Use Footprint. All of the uses are identified in the Appendices. These maps are available at:

<http://www.arcgis.com/explorer/?open=7a8b445a339247579a85f6a96fb776f3&extent=-8744521.29699029,4311718.80453884,-8177052.45970874,4666940.99662621> and on the

Virginia CZM's Coastal GEMS portal: <http://coastalgems.org>. The VA CZM Program partnered with the NOAA Coastal Services Center to conduct this workshop. The event also served as a training event for the other MARCO states in preparation for their PGIS efforts; Maryland, Delaware and New Jersey were present during the workshop.

During the reporting period, the Stakeholder Coordinator attended the Virginia Ports and Shipping sectors meeting, held at the Virginia Pilot Association offices in Virginia Beach (Sept 27, 2012). This meeting provided an opportunity to share the recent information regarding the PGIS session on the eastern shore and nurture a partnership with the shipping industries. This meeting revealed significant shipping needs including a depth of channel (approx 60ft) that will be required for the new ships passing through the expanded Panama Canal (Pana-Max). At this time, the shipping industry indicated a negotiated change in the wind lease area had been agreed upon with BOEM to maintain an offshore channel of this depth. The port of Hampton Roads currently has the infrastructure in place to offload the new container ships that will pass through the expanded canal and does not need to dredge for sufficient channel depth. Detailed meeting notes can be found at:

http://www.deq.state.va.us/Portals/0/DEQ/CoastalZoneManagement/Virginia_Ports_Shipping_Ocean_Planning_Meeting_Sept_2012.pdf

Also during the project, the Stakeholder Coordinator attended the BOEM Offshore Wind, Recreational and Commercial Fishing Mitigation Measures Development meeting (Oct 12, 2012), held at the Virginia Beach Aquarium and Marine Science Center. This meeting was one of several meetings planned by BOEM to occur along the Atlantic coast to obtain stakeholder input from the recreational and commercial fishing industries. The meeting minutes and attendee lists are available on the BOEM Website:

http://www.boem.gov/uploadedFiles/VA_Beach_Meeting_Minutes%20110112.pdf

The Environmental Analyst represented MARCO by attending the Northeast Regional Ocean Council (NROC) Regional Planning Body (RPB) Kickoff meeting, in Portland, ME (Nov 19-20, 2012). Detailed meeting notes can be found at the NROC Web:

<http://northeastoceancouncil.org/wp-content/uploads/2012/11/Agenda-NE-RPB-Meeting-Nov-19-and-20-2012.pdf>

<http://northeastoceancouncil.org/wp-content/uploads/2012/12/Summary-NE-RPB-Meeting-Nov-19-20-20121.pdf>

The Stakeholder Coordinator assisted the state of Delaware in their PGIS efforts by providing meeting facilitation to collect recreational user information (Jan 21-25, 2013). This workshop was similar to the efforts conducted in Virginia to ensure the data is compatible between states. This successful workshop populated Delaware's ocean data with the same categories collected in Virginia and Maryland.

The Environmental Analyst/Stakeholder Coordinator worked with the Monmouth Project team to create and market a Recreational Boater Survey. The Analyst provided technical review and developed a mailing list for the Commonwealth based upon people in zip codes that may be likely ocean users.

Marine Debris

The Environmental Analyst worked with Virginia CZM staff to coordinate the development of a Marine Debris Summit as a prelude to creation of a Marine Debris Management Plan (subsequently renamed a Marine Debris Reduction Plan). The *Virginia Marine Debris Summit - Exploring Solutions: Educate, Motivate, Innovate* was held on February 27-28, 2013 at the

Virginia Aquarium & Marine Science Center. The goal of the summit was to lay the groundwork for development of a Virginia Marine Debris Management (Reduction) Plan for the Commonwealth to reduce the impacts of marine debris. Having a plan in place also will help Virginia meet one of its goals as a member of the Mid-Atlantic Regional Council on the Ocean (MARCO). Management options from the summit will be presented to the Virginia Coastal Policy Team and to MARCO for consideration. It is hoped that MARCO would use the Virginia plan as a template for a regional plan.

A planning committee comprised of staff and representatives from the Virginia Coastal Zone Management Program, Virginia Commonwealth University (VCU), Virginia Aquarium and Marine Science Center, Clean Virginia Waterways/ Longwood University, Virginia Sea Grant, Virginia Institute of Marine Science (VIMS), and the Department of Environmental Quality (VA DEQ) Office of Public Communication and Outreach and Office of Pollution Prevention Program developed the agenda, secured speakers and facilitators, and undertook all logistics. The Virginia Marine Debris Summit was sponsored by the Virginia Coastal Zone Management Program through a grant to the Virginia Aquarium. The Virginia Marine Products Board and the Virginia Seafood Council sponsored the evening reception. Facilitation was provided by the Virginia Commonwealth University and the VA DEQ and note taking was conducted by staff from VA CZM, the VA Department of Conservation and Recreation (VA DCR), VCU and DEQ. This effort included a partnership with the USEPA and NOAA Marine Debris Program.

A facilitator's guide and note taker's guide was developed to guide the collection of conversations from participants. Additionally, a template was developed for the note takers to guide their collection of Actions. The intent was for the note takers to record the Action, Responsible Party and the Timeframe. A simplified pull down menu was developed to facilitate the collection of these data and minimize the altering of comments from the participants. The summit engaged 66 professionals from federal, state and local governments, nonprofits, community groups, industry, and academia who work to prevent and mitigate the litter and waste that degrades our coastal and ocean waters.

To inform the development of a Marine Debris Plan, an overall outline is necessary to influence the language and direction.

Background—Problem and source identification, research

Recreational and Commercial Fishing Gear

Butts and Balloons

Single Use Plastics

Special Concern Items

User Input—Important information provided by attendees

- Negative imagery of impacted wildlife
- Recycling is confusing
- There is no silver bullet
- Balloons are an area that should be addressed considering there is a current law for releases
- Trash is a watershed issue and should be considered “aquatic debris” as opposed to “marine debris”
- Organizations need interconnected communication and coordination

- Waste management is a local and economic issue
- Include: Fishermen, recreational boat owners, County Government, Retail establishments, etc
- Engage outside states that have implemented programs for guidance in the VA efforts

Vision

(Suggested) Reduce impacts of plastics in the environment in a comprehensive manner that includes a watershed based approach

Goals

Reduce the impacts from various sources of plastics in the environment
 Partner with Federal, State, Local and NGOs to address controlling plastics
 Explore the differences between recycling and re-use of plastics

Objectives

Work with industries and sectors to address the sources emanating from them
 Recreational and Commercial fishing
 Floatable debris in stormwater flows
 Single Use plastics for food containers
 Increase research opportunities
 Explore Regulatory changes
 Explore outreach and educational opportunities

Action Items with timeframe

Suggested action items have been generated from the Summit

- Incorporate marine debris education in boater education classes and other professional association meetings - perhaps when watermen or recreational fishermen apply for a license – develop on-line or written quiz for an incentive (locations for education and incentives – retailers, marinas – e.g., Bass Pro, West Marine, Walmart) and Boat US Foundation (Short Term <12 mos)
- Develop and implement a monitoring program with intent and purpose. [Partner depends on what is being monitored; most likely Gov't and NGO; Alice Ferguson Foundation] (OTHER) (Long >3yrs)
- Conduct a systematic strategic planning process at the State and Regional Level. Identify: What are the big issues? What are the priority opportunities? Goals? Available Resources? Key Players? Deliverables? Barriers to success. Do assessment homework first. (STATE) (Short Term <12 mos)
- Education to include the connections between land and water via storm drain; motivate to change behavior; involve schools and MWEE (OTHER)
- Develop a balloon campaign – multilevel comprehensive education program; offer alternatives and legacy; collaborating with the balloon industry

The complete Marine Debris Summit notes are included in the Appendix of this report.

Appendices

Appendix A
Ocean Stakeholder Database

**Appendix B
Ocean Uses for PGIS Sessions**



Mid-Atlantic Human Use Categories for Ocean Planning

Humans use the Mid-Atlantic Ocean in many ways. For some uses reliable data exist and those data layers are viewable on the Mid-Atlantic Regional Council on the Ocean’s (MARCO’s) Mapping and Planning Portal (www.midatlanticocean.org). There are three categories of human use for which more data are needed: recreational, cultural and commercial fishing use. A technique called Participatory GIS (PGIS) is proving very useful for mapping and collecting data on recreational use. Below is a chart of various types of recreational uses that MARCO intends to use in PGIS workshops in the coming months.

Boating for Hire (Charter) Uses

Use name	Includes	Appropriate Mapping Scale	
		Min	Max
Charter fishing	Charter activity related to fishing led by charter vessels; ≤ 6 persons (6-pack) and headboats (large # persons)	1:250,000	1:500,000
Charter diving/snorkeling	Charter activity related to recreational dive or snorkel charters	1:100,000	1:250,000
Charter party cruises	Charter activity for cruises	1:250,000	1:500,000
Charter wildlife viewing	Charter activity focused on wildlife viewing	1:250,000	1:500,000
Charter scenic viewing	Charter activity focused on scenic or natural area viewing, photography, historic perspective	1:250,000	1:500,000
Charter transport	Charter activity related to transport services, ferry boats, etc	1:250,000	1:500,000
Other			

Recreational Fishing/Hunting Use

Use name	Includes	Appropriate Mapping Scale	
		Min	Max
Recreational kayak and non-motorized vessel fishing	Any fishing activities from private non-motorized vessels	1:50,000	1:100,000
Recreational dive fishing	Recreational SCUBA and free-dive fishing	1:100,000	1:250,000
Recreational fishing	Any fishing activities from private	1:250,000	1:500,000

from motorized vessels	motorized vessels, including tournaments		
Recreational shore fishing	Recreational fishing from beaches, piers	1:50,000	1:100,000
Recreational shellfish harvesting	Digging clams, gathering oysters ; excludes shellfish cultivation	1:50,000	1:100,000
Recreational waterfowl hunting	Hunting from shore, from blinds and from boats	1:50,000	1:100,000
Other			

General Recreational Use – Non-consumptive

Use name	Includes	Appropriate Mapping Scale	
		Min	Max
Motorized boating	Personal watercraft, outboard motors, private motorized vehicles	1:100,000	1:500,000
Paddling	Kayaking, canoeing, rowing, paddle-boarding, outrigger paddling	1:50,000	1:100,000
Sailing	Sailboats, overnight anchoring, races, regattas	1:250,000	1:500,000
Scuba/snorkeling/diving	Scuba diving, tethered diving, snorkeling, free diving	1:25,000	1:50,000
Shore Use	Barrier islands, marshes , marsh islands, and beach visitation; all non-consumptive uses such as birdwatching, sunbathing, picnicking, etc.	1:25,000	1:50,000
Surface water sports	Surfing, wind-surfing, kite-surfing	1:25,000	1:50,000
Swimming	Short and long distance surface swimming any distance from shore	1:25,000	1:50,000
Other			

1:25,000 (1 inch = about 0.4 miles) 1:50,000 (1 inch = about 0.8 miles) 1:100,000 (1 inch = about 1.6 miles)
1:250,000 (1 inch = about 4 miles) 1:500,000 (1 inch = about 8 miles) 1:1,000,000 (1 inch = about 16 miles)

Cultural Use

Cultural uses of the coast and ocean are important but spatial data will not be collected at these PGIS workshops. However, participants will be asked to help define and describe the relative importance of cultural uses for their region of coast and ocean. This information will be used to develop a strategy for collecting cultural use information in the future. If time allows during the workshops participants may create categories of cultural use data that should be mapped. Below are a few possible categories to begin the discussion:

Use name	Includes	Appropriate Mapping Scale	
		Min	Max
Historic/cultural	Ocean areas or views with inherent cultural,	1:250,000	1:500,000

	traditional, archaeological, religious, spiritual, tribal or historic value		
Scenic/natural views	Ocean areas or views that provide unique opportunities for photography, historic perspective, visual experience, etc.	1:250,000	1:500,000
Other			

Commercial Fishing Use

Some commercial fishing data is available through Vessel Trip Reports and Vessel Monitoring Systems collected by NOAA. However it is important to engage commercial fishers in the ocean planning process and to offer an opportunity for them to provide their own data on areas important to them. Some states may choose to do this through workshops using PGIS, some may contract with their state Sea Grant Programs, and others may take yet another approach. How that information is collected may necessarily vary by state.

Appendix C1

Virginia Marine Debris Summit—Exploring Solutions: Educate, Motivate and Innovate Feb 27-28, 2013

Virginia Aquarium and Marine Science Center

Overview

The *Virginia Marine Debris Summit - Exploring Solutions: Educate, Motivate, Innovate* was held on February 27-28, 2013 and was hosted at the Virginia Aquarium & Marine Science Center. The goal of the summit was to lay the groundwork for development of a Virginia Marine Debris Management Plan for the Commonwealth to address the impacts of Marine Debris. Having a plan in place also will help Virginia meet one of its goals as a member of the Mid-Atlantic Regional Council on the Ocean (MARCO). Management options from the summit will be presented to the Virginia Coastal Policy Team and to MARCO for consideration.

A planning committee comprised of staff and representatives from the Virginia Coastal Zone Management Program, Virginia Commonwealth University (VCU), Virginia Aquarium and Marine Science Center, Clean Virginia Waterways/ Longwood University, Virginia Sea Grant, Virginia Institute of Marine Science (VIMS), and the Department of Environmental Quality (VA DEQ) Office of Public Communication and Outreach and Office of Pollution Prevention Program developed the agenda, secured speakers and facilitators, and undertook all logistics. The Virginia Marine Debris Summit was sponsored by the Virginia Coastal Zone Management Program through a grant to the Virginia Aquarium. The Virginia Marine Products Board and the Virginia Seafood Council sponsored the evening reception. Facilitation was provided by the Virginia Commonwealth University and the VA DEQ and note taking was conducted by staff from VA CZM, the VA Department of Conservation and Recreation (VA DCR), VCU and DEQ. This effort included a partnership with the USEPA and NOAA Marine Debris Program.

A facilitator's guide and note taker's guide was developed to guide the collection of conversations from participants. Additionally, a template was developed for the note takers to guide their collection of Actions. The intent was for the note takers to record the Action, Responsible Party and the Timeframe. A simplified pull down menu was developed to facilitate the collection of these data and minimize the altering of comments from the participants. The summit engaged 66 professionals from federal, state and local governments, nonprofits, community groups, industry, and academia who work to prevent and mitigate the litter and waste that degrades our coastal and ocean waters. The attendance list is provided in the Appendices.

Outcome of the Summit

The Summit provided detailed sessions covering the topics of Fishing Gear (Commerical and Recreational), Items of Special Concern: Cigarette Butts and Balloons, Plastics in the Marine Environment: Food and Beverage Containers and Plastic Bags, Innovative Programs, Solutions and Actions. Speakers for the sessions included the Nicholas Mallos of the Ocean Conservancy, Ashley Carlson of the American Chemistry Council, Samara Norman of TREX, Matt Robinson of the DC Department of the Environment, Jason Rolfe of NOAA and Robert Benson of the USEPA. Additionally, local speakers included: Matt Swingle of the VA Aquarium and Marine

Science Center, Cris Ausink of the City of Hampton, Katie Register of Clean VA Waterways and research faculty from VIMS. A full agenda is provided in the Appendices. The keynote speaker for the Summit was the Virginia Secretary of Natural Resources Doug Domenech. Presentations, where available, have been posted to the VA CZM Web:

<http://www.deq.virginia.gov/Programs/CoastalZoneManagement/CZMIssuesInitiatives/VirginiaMarineDebris.aspx>

Breakout groups were self selected by the participants based upon their interest in providing meaningful participation in the development of draft Actions to inform a Management Plan. The topics were broken down into Fishing Gear (Recreational and Commercial), Single Use Plastics, and Butts, Balloons, and Special Concern Items. Participants were also requested to provide additional unaddressed recommendations in the form of hand written notes on provided 3x5 cards. All group facilitators were requested to identify the “responsible party” and “timeframe” for the suggested action. Based upon the notes, not all facilitators nor note-takers were able to record this valuable component. Where this was recorded, it is noted below.

Additionally, as part of the introduction into each breakout session, the groups were to respond to trigger questions such as:

- What specific information or images stood out to you?
- How did you feel at the end of the day?
- Who else should be involved and why?

Responses to these questions included:

- Negative imagery of impacted wildlife
- Recycling is confusing
- There is no silver bullet
- Balloons are an area that should be addressed considering there is a current law for releases
- Trash is a watershed issue and should be considered “aquatic debris” as opposed to “marine debris”
- Organizations need interconnected communication and coordination
- Waste management is a local and economic issue
- Include: Fishermen, recreational boat owners, County Government, Retail establishments, etc
- Engage outside states that have implemented programs for guidance in the VA efforts

The notes from this session are provided in the Appendices.

As the discussions moved into the actual development of Actions, the following suggested actions were provided for each of the topic areas:

Fishing Gear:

- Educate and dispel urban myths about abandoned fishing gear – kids learn from parents (Short Term <12 mos)
- Incorporate marine debris education in boater education classes and other professional association meetings - perhaps when watermen or recreational fishermen apply for a

license – develop on-line or written quiz for an incentive (locations for education and incentives – retailers, marinas – e.g., Bass Pro, West Marine, Walmart) and Boat US Foundation (Short Term <12 mos)

- Encourage, explore and consider requiring the expanded use of biodegradable hatches on crab pots; work with industry or target manufacturer; and develop a “how to” for own constructed pots (Medium Term 12mos to 3 yrs)
- Encourage watermen to report loses of crab pots and other derelict fishing gear (Short Term <12 mos)
- Fund more clean-up efforts (legal issues) (Medium Term 12mos to 3 yrs)
- Continued collection of derelict crab pots through both financial incentives and enforcement (Short Term <12 mos)
- Explore enforcement and legal issues of abandoned pots with identification still on them (current barrier is low number of marine patrol officers available) (Short Term <12 mos)
- Continue and expand the fishing line recycling program (Short Term <12 mos)
- Educate/Explore/Research/Encourage/Develop use of biodegradable fishing line (Medium Term 12mos to 3 yrs)
- Educate about fishing net use and net avoidance (Short Term <12 mos)
- Place identification tags on clam nets on the Eastern Shore (Short Term <12 mos)
- Follow progress (encourage implementation) of shellfish BMPs to address TMDLs
- Notify boaters about the location of aquaculture leases and cages; not only on the Internet but also for unidentified or unreadable PVC markers in riverine sites (Short Term <12 mos)
- Prioritize the impact of recreational and commercial fishing gear debris: where do we put our emphasis? (Short Term <12 mos)
- Invite additional partners to the table, such as: commercial watermen, recreational fishermen, agriculture, marine police, CBF and other water groups, boaters, marinas, VDOT, Coast Guard, boat manufacturing industry and retail businesses, waste management and disposal companies, Ducks Unlimited and duck hunters, AG or attorneys, JAG, environmental planners (Short Term <12 mos)
- Develop and publicize the economic (and environment) impact loss data – HR Green, VIMS, PDCs (Short Term <12 mos)
- Explore methods to obtain permission and gain access for clean ups in areas un-accessible (ex. shallow) or difficult to reach sites (ex. military)
- Create new methods to clean up less accessible areas
- Determine property ownership of clean-up areas
- Identify ownership of and responsibility for trash
- Develop methods for gaining access to private or government properties
- Take advantage of resources from Boat USA and Keep America Beautiful
- Encourage paddlers, fishers and other users to carry pocket knives or scissors to clip line
- Additional Topics:
 - Storms and tornado debris
 - Drinking and marine debris
 - Ammunition and fireworks
 - Incentives for crab pot debris
 - Cigarette butts in and around boats and marinas

Single Use Plastics:

- Put pressure on brand owners to use proper recycling labels (NGO) (Medium Term 12mos to 3 yrs)
- Develop and implement a monitoring program with intent and purpose. [Partner depends on what is being monitored; most likely Gov't and NGO; Alice Ferguson Foundation] (OTHER) (Long >3yrs)
- Appropriate education to take action for defined audiences [look at Alice Ferguson Foundation; Keep America Beautiful models] (NGO) (Medium Term 12mos to 3 yrs)
- Marketing to elicit action: ex. Washed Ashore's Every Action Counts; The Ocean Project (NGO) ((Medium Term 12mos to 3 yrs)
- Implement the Keep America Beautiful "Littering is Wrong Too" campaign [Alice Ferguson Foundation has a host of resources available] (NGO) (Short Term <12 mos)
- Conduct a systematic strategic planning process at the State and Regional Level. Identify: What are the big issues? What are the priority opportunities? Goals? Available Resources? Key Players? Deliverables? Barriers to success. Do assessment homework first. (STATE) (Short Term <12 mos)
- Host consortia of expertise on Trash Free Waters to develop strategic plan. [Clean Virginia Waterways] (ACADEMIC) ((Short Term <12 mos)
- Encourage Virginia Junior Academy of Science and Virginia Academy of Science to focus research on Marine Debris. [Virginia Office of Environmental Education and Dept of Education] (STATE) (Medium Term 12mos to 3 yrs)
- Radically expand Environmental Education activities by state agencies. (STATE) (Short Term <12 mos)
- Develop a strategy for removal of existing debris/trash. (PLANNING DISTRICTS) (Short Term <12 mos)
- Explore/document existing regulatory actions that impact marine debris. [nests within assessment process as part of strategic plan development] (STATE) (Short Term <12 mos)

Butts, Balloons, and Special Concern Items:

- Address storm debris management, especially from flooding) – Engaging local governments; disposal of organic/inorganic material policy; research of salt concentrated (contaminated) materials
- Education to include the connections between land and water via storm drain; motivate to change behavior; involve schools and MWEE (OTHER)
- Develop a balloon campaign – multilevel comprehensive education program; offer alternatives and legacy; collaborating with the balloon industry
- Change statutes regarding balloon releases and increase enforcement; have JLARC do regulator review
- Increased penalties for litter; review penalty levels and connect to enforcement via committee
- Promote central repository marine debris clearing house; NOAA marine debris (FEDERAL)

- Engage local governments for cleaning –up derelict vessels and structures; identify funding streams; public/private rights/policy; VMRC has derelict vessel program for boats in water (STATE)
- Establish marine debris monitoring sites for the purpose of ongoing data collection and use as public awareness tool/educator tool
- Establish water quality standards for nicotine and other plastic chemical additives
- Promote balloon litter study and engaging more citizens as citizen scientists
- Investigate impacts of used fireworks as litter source (NGO) (Short Term <12 mos)
- Increased adoption of storm drains by neighborhoods (Adopt-A-Drain)
- Education on refusing/reducing/responsible use of plastic bags; promote BYOB (bring your own bag)
- Research and promote health/economic effects of plastics and other litter off-gassing/leaching
- Review the planning document on a yearly basis for revision
- Create a survey via social media to identify alternatives to balloon releases
- Define packages of ads thrown onto private properties as litter (review ordinances)
- Consider statewide bag ban or fees for use; talk with legislators
- Identify hotspots for cigarette butt littering; identify incentives for providing receptacles; review ordinances and conversations with hotspot owners

Additionally, 3x5 index cards were collected from participants indicating their top three priorities as outcomes and to inform the development of the Management Plan. Overall categories includes marine debris monitoring, storm drain management and the connection from upland sources, management of derelict vessels, balloon release laws or campaigns, adoption of policies and outreach/education.

Specifically, these included:

- Establish marine debris monitoring sites (x3)
- Storm drain/debris management (x3)
- Develop a balloon release campaign (x3)
- Education to include the connection between land and water via storm drains (x2)
- Policies established on derelict boat; determine the authorities and jurisdictions (x2)
- Develop a NOAA Marine Debris Clearing House (x2)
- Research and promote the health and economic effect of plastic and other litter in the environment
- Establish water quality standards for nicotine and other plastics
- Education of refusal and the reduction of plastic bags
- Education on the responsible use of plastic bags
- General adoption of storm drains by neighborhoods (Adopt-a-Drain)
- NOAA promotion of their data on web
- Outreach and education to youth
- Change or enforce the balloon release laws
- Monitoring sites involving kids and using as a tool to bring your own bag (BYOB) campaign
- Establish improved water quality standards
- Establish a balloon study and implement citizen science

- Research the health and economic benefits of plastics and other litter leaching impacts

EPA Lead Discussion: EPA’s Trash Free Waters Program

At the end of the VA Marine Debris Summit, Bob Benson of the US EPA provided an overview of the USEPA Trash Free Water’s Program and led a discussion of to identify needs and next steps to implementing such an effort.

The USEPA Trash Free Waters Program has five essential program elements:

1. Make the case that the impacts of trash in aquatic ecosystems justify priority action
2. Determine whether plastic trash has major human health effects in the food chain.
3. Define the next generation of public engagement in trash prevention.
4. Create a Sustainable Materials Management program for plastics packaging.
5. Establish regional watershed partnership programs for zero trash in coastal waters.

Through the discussion lead by Mr. Benson, the topic began with a, “*Need to understand the needs to support trash prevention*” in Virginia. For example, Mr Benson, suggested the process work with other fed groups such as NOAA and indicated a need for more flexibility in state pass-through grants from the Federal Government so states can redirect \$ as needed. Topically, the process was to identify:

- What is working
- What is not working
- What tools do you need
- What is the number one thing the fed govt can do for us (funding)

The focus of the conversation was primarily on: “What can the fed govt do to help. This discussion resulted in the following list of suggestions:

1. Provide funding to support research, capacity building (preventing, reducing & cleaning up)
2. Work closely with other fed partners to break down silos of fed agencies
3. More flexibility in grants
4. Facilitate partnerships
5. National guidelines for MD reduction
6. Tech assistance for understanding problem, monitoring
7. EPA to encourage states to be more proactive stewards (citizen engagement)
8. Help private & public partnerships (govt, NGO, industry)
9. Be the keystone in aquatic debris cleanup. National guidelines for aquatic debris reduction and states implement.

Mr Benson sought to answer, “Do we set inspirational goals or regulatory standards?” Asking, “Are these volunteer-based and individual-based actions.”

Consensus from the discussion indicated, that monitoring is needed. To facilitate the monitoring, the following suggestions were provided:

- Money to support monitoring, gather data, assessment of known data.
- Local & State objectives

- More data for baseline & to compare to older data sets

Finally, Mr Benson, asked to identify the relevant partners that may be willing to participate in the implementation of the National Trash Free Waters Program, in Virginia. The following list of suggestions was provided by the participants:

- VA Recycling Assn
- VA Waste Management Companies
- VA Municipal League
- VA Association of Counties
- VA Planning District Commissions
- VA Recycling Association
- Clean Virginia Waterways
- Regional and watershed groups

Final Recommendations

As demonstrated through the work sessions and from thoughtful participation by the attendees, significant areas have been identified to address the overall marine debris issue. An overarching theme which became apparent through this process was marine debris is not solely a coastal issue but a larger watershed-based issue. This issue is similar to the nonpoint source pollution as it emanates from many diffuse sources and is collected in the estuaries and coastal areas. To sufficiently address marine debris, the overall plan must include a statewide and watershed-wide component.

Resources from the NOAA Marine Debris Program and the USEPA have been offered to assist in the development of a monitoring program to quantify the impacts of marine debris and collection efforts. As well as assisting in the development of a regional approach to address a “Trash Free” initiative by the USEPA. Additionally, the VA CZM Program is supporting the development of a Marine Debris Management Plan, with funds to support the Clean Virginia Waterways, VA Aquarium and the VCU for this effort. A draft plan will be based upon a strategic planning effort that includes the participation from participants and attendees at the Summit and will be advanced to the MARCO VA Coastal Policy Team for adoption.

Appendix C2 – Virginia Marine Debris Summit Agenda

Welcome and Goals of the Workshop

Mark Swingle, Director of Research & Conservation, Virginia Aquarium & Marine Science Center (remarks only - no presentation)

Exploring Solutions that Educate, Motivate and Innovate

Laura McKay, Program Manager, Virginia Coastal Zone Management Program

Virginia Secretary of Natural Resources Remarks

Doug Domenech, Secretary of Natural Resources, Commonwealth of Virginia

Marine Debris – Global Perspectives (presentation to be posted soon)

Nicholas Mallos, Conservation Biologist & Marine Debris Specialist, The Ocean Conservancy

Microplastics: Is smaller bigger?

Dr. Robert Hale, Professor of Marine Science, Virginia Institute of Marine Science, College of William and Mary

Fishing Gear: Commercial and Recreational

Virginia Fishing Line Recycling Program

Alicia Nelson, Fisheries Management, Virginia Marine Resources Commission

Marine Debris: Lost Commercial Fishing Gear in Virginia Waters

Dr. Donna Marie Bilkovic, Virginia Institute of Marine Science, College of William and Mary
Items of Special Concern: Cigarette Butts & Balloons

Cigarette Butts as Litter

Katie Register, Executive Director, Clean Virginia Waterways of Longwood University
Bronwen Evans, Director of Litter Programs, Keep America Beautiful

Balloons as Litter: A Rising Concern

Christina M. Trapani, Stranding Information Specialist, Virginia Aquarium Stranding Response

Plastics in the Marine Environment: Food and Beverage Containers and Plastic Bags

Convenient Trash: On the go, on the beach, in the ocean

Nicholas Mallos, Conservation Biologist & Marine Debris Specialist, The Ocean Conservancy

Marine Debris Solutions: Creating Effective, Collaborative Partnerships to Reduce Litter

Ashley Carlson, Consultant, American Chemistry Council

Keep Virginia Beautiful Plastic Bag Campaign

Mike Baum, Executive Director, Keep Virginia Beautiful

Recycling Polyethylene Film: Trex Plastic Recycled Lumber

Samara Norman, Trex

The Power of a Nickel: The Story of the DC Plastic Bag Fee

Matt Robinson, Environmental Protection Specialist, Stormwater Management Division, District of Columbia Dept of Environment

Highlights of Innovative Programs, Solutions and Actions

Solutions: A Toolbox of Options

Katie Register, Executive Director, Clean Virginia Waterways of Longwood University

Do You Sea What I See?

Cris Ausink, HRStorm, Hampton Clean City Commission (presentation not available)

Stream to Sea

Wade Blackwood, Director, American Canoeist Association

Pilot Project to Assess Behavior and Attitudes Regarding Discarded Trash and Ocean Health

Mark Swingle, Director of Research & Conservation, Virginia Aquarium & Marine Science Center

Implementing the Anacostia River Trash TMDL

Matt Robinson, Environmental Protection Specialist, Stormwater Management Division, District of Columbia Dept of Environment

NOAA Action to Reduce the Impacts of Marine Debris: Responses to Pervasive Problems and Natural Disaster Events

Jason Rolfe, Southeast and Caribbean Regional Coordinator, Marine Debris Program, National Oceanic and Atmospheric Administration

EPA National Trash Free Waters Program: A Strategic Approach to Reduce Trash and Debris in Aquatic Ecosystems

Robert Benson, Senior Advisor for Aquatic Ecosystem Strategies, Office of Wetlands, Oceans and Watersheds, United States Environmental Protection Agency

Appendix C3 – Virginia Marine Debris Summit Attendees

Virginia Marine Debris Summit – February 27 & 28, 2013 - Attendees

Email Address	First Name	Last Name	Job Title	Company Name
adamsha@mymail.vcu.edu	Hillary	Adams	Student	Virginia Commonwealth University
faye.andrashko@nnswwd.org	Faye	Andrashko	Education & Public Relations Specialist	Northern Neck Soil & Water Conservation District
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kyle.barbour@dcr.virginia.gov	Kyle	Barbour	Park Manager	DCR-False Cape State Park
mbaum@keepvirginiabeautiful.org	Mike	Baum	Executive Director	Keep Virginia Beautiful
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james.beckley@deq.virginia.gov	James	Beckley	Quality Assurance Coordinator, Office of Water Monitoring	Virginia Dept. of Environmental Quality
benson.robert@epa.gov	Robert	Benson	Senior Advisor for Aquatic Ecosystem Strategies	EPA, Office of Wetlands, Oceans and Watersheds
donnab@vims.edu	Donna Marie	Bilkovic	Research Assistant Professor	Virginia Institute of Marine Science
wblackwood@americancanoe.org	Wade	Blackwood	Executive Director	American Canoe Association
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ndean@allianceforthebay.org	Nissa	Dean	Virginia Director	Alliance for the Chesapeake Bay
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susan.m.lang@navy.mil	Susan	Lang	Environmental Planner	NAVFAC Atlantic
adrianaleiva@hotmail.com	Adriana	Leiva	Vice Chair	Surfrider Foundation-Texas Coastal Bend
mlenox@dnr.state.md.us	Michelle	Lennox	Program Manager	Mid-Atlantic Regional Council on the Ocean (MARCO)
blewis@nnpdc17.state.va.us	Benjamin	Lewis	Regional Litter Control Coordinator	Northern Neck Planning District Commission
Craig.Lott@deq.virginia.gov	Craig	Lott	Environmental Specialist	Virginia Dept. of Environmental Quality
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geralyn_mireles@fws.gov	Geralyn	Mireles	Wildlife Biologist	Back Bay Wildlife Refuge
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jason.rolfe@noaa.gov	Jason	Rolfe	Southeast and Caribbean Regional Coordinator	NOAA Marine Debris Program
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	Mike	Ward(?)	Student	
virginia.witmer@deq.virginia.gov	Virginia	Witmer	Outreach Coordinator	Virginia Dept. of Environmental Quality
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Total Attendees - 66

Appendix C4—Facilitator's Guide

Virginia Marine Debris Summit
February 27-28, 2013
Virginia Aquarium and Marine Science Center

Facilitator and Note-taker Guide for Break-out Sessions: the Focused Conversation to identify Strategies and Actions

Intro (5 minutes: Please use your own words, paraphrase, and make it yours...don't just read!)

Thank you for joining this session on (*Fishing Gear, Single Use Plastics, Items of Special Concern, put title of break out group in here.*) The Virginia Coastal Zone Management Program (VCZM) truly appreciates your participation in this discussion. My name is (*give a bit of info on yourself...*) and I will be leading us through a focused conversation for the next hour and a half. Your input today will help us toward our ultimate goal to develop a Marine Debris Management Plan for Virginia. Virginia is first in the region to initiate this process and much will be built upon what we begin today. You have selected this session because you have an interest in this topic and wanted to help craft the plan to manage marine debris.

We will follow a process that might be new to some of you, so please hang in there and have fun. The questions are organized in a way that will get us to our ultimate work-session goal of identifying strategies and actions, but we will first ask you to think about and reflect on what we heard yesterday from experts in the field of marine debris. Yesterday, we heard several experts address some of the most critical issues in Marine Debris including Fishing Gear, Butts and Balloons, Single Use Food and Beverage Containers, Plastic Bags and Innovative Solutions. We hope those presentations as well as your own experiences will inform our discussion.

As your process facilitator, I will now pose a series of open ended questions intended to stimulate and focus our discussion. You have heard some similarities in yesterday's presentations, such as need for regulatory changes or enforcement, education and communication, and incentives for positive action. We'd like you to think about what needs to happen in terms of short term, mid- term and long term goals.

Our note taker (recognize the person) will record our conversation and project the notes on a flip chart and the screen to help all of us stay on track and to capture the group's discussion.

Ground Rules:

- Openly share your opinions
- Listen to the thoughts of your peers
- There is no wrong answer, we are not here to debate
- Please take care of your personal needs
- Phones to stun and take calls away from discussion
- Bathrooms are...

Now, let's begin!

(10 minutes) Objective Questions:

Thinking about what you heard in yesterday's presentations.....

- What specific information stood out for you ?
- What are your take aways?
- Any images that hit you and why?

(15-20 minutes) Reflective Questions:

Your reaction to the information you heard yesterday....

- What surprises or concerns you?
- What resonated with you?
- What did you like or not like hearing?
- What still leaves you with questions?
- As you reflect on the attendees, who else do you think might need to be part of this process?
- Are your personal experiences consistent or inconsistent with what you heard?
- How did you FEEL at the end of the day.....?

(20 minutes) Interpretive Questions:

How you will use the meaningful information you heard yesterday....

- What previously held ideas were changed for you if any?
- What do you know now that you did not know before this planning summit? (ACTION: Ask participants to give two numbers on scale of 0-5. First number represents how much they knew before the presentations and second number represents how much they know now, after the presentations)

Let's take a look at implementation of a Marine Debris Management Plan.

- What role do you see yourself playing in the solution to the marine debris problem?
- What do we need to do or change to be on the right track in VA?
- What are the main steps in moving forward?
- What resources are needed?
- Who else should be involved and why?

(approx 35 minutes) Decisional Questions:

Make a decision about actions needed to form the plan!

Based on our discussion so far, let's now focus on specific strategies for Virginia...remember to suggest if short, mid or long term action.

- As Virginia moves forward, what are some of the specific things we can address?
- What are the specific regulatory changes needed?
- How might educational programs include and address marine debris?
- What incentives might be involved?
- How can we measure progress?
- What are funding priorities for projects?

Note Taker will create/populate while projecting on screen the action planning spread sheet with:

- WHO
- WHAT (action verb), Action to be taken
- WHEN (Timeframe: short, mid, long)

Final Prioritizing:

Before we leave, I would like you to take a 3x5 card and write the top three action items from the spread sheet. Please put your 3x5 card in this pile on your way to the final session.

Closing Remarks:

We, the VCZM and our partners, want to thank you so much for your active listening and for your contributions to the focused conversation. Your input is critical to developing a plan that will be achievable. If you are interested in continuing to participate in the discussion of (say the name of this break out session), please list your name and contact information on the flip chart in the back. We will distill the comments into a draft plan that will be available for additional input.

Roles of the Note Takers

Teams:

Angela Neilan and Virginia Witmer

Ann Regn and Hillary Adams

Todd Janeski and Dave Ruble

The note takers are to support the facilitators by recording and displaying the comments of the participants. They are to remain neutral (as will the facilitators), not influence the statements, nor interrupt the speaker. Responses recorded are to be the exact language the participant has provided. Please do not abbreviate, interpret their statement or change their language. Note takers may ask for clarification and a confirmation the participant's comment was accurately recorded. It is the responsibility of the facilitators to obtain the involvement from the participants.

The note takers will record on flip charts the responses to the Objective, Reflective and Interpretive questions. These will be posted on the walls (need tape or adhesive flip pads) for all participants to see and reference.

All flip chart sheets will be numbered in the top right hand corner.

Print in large text so the language is visible by the furthest person in the room. Approximately 2" letters.

With the guidance from the facilitator, the title at top of sheet may include:

“What we heard”

“Your reaction”

“Who is missing”

“What are some key questions?”

The note takers will transition to the laptop to record the responses to the Decisional questions. They are to capture the active language for Strategies and Actions. Responsible parties will be

identified as will the time scale.

Efficiency is the key to conducting this facilitated process and teamwork is essential for accurately capturing the participant's viewpoint and comments.

Appendix C5—Note Taking Template

Responsible Party	Action	Timeframe
Choose WHO.		Specify timeframe
Choose WHO.		

Appendix C6—Trigger Question Responses, prior to Action Item development

Single Use Food and Beverage

(10 minutes) Objective Questions:

Thinking about what you heard in yesterday's presentations.....

Trigger Questions:

- What specific information stood out for you?
- What are your take-aways?
- Any images that hit you and why?
 - Bottle caps in the stomach of animals
 - Trash TMDL in DC is awesome
 - Comparison of Virginia data with the world data
 - Recycling is confusing
 - How to change behavior and culture of single use
 - No one is excluded
 - Everyone is involved
 - No silver bullet – solutions will need to be combination of methods
 - No exclusions
 - Bridging the watershed with coastal communities
 - Ocean is always downstream
 - Trash as a watershed issue
 - Marine debris is “aquatic” debris
 - Trash blindness
 - Fundamental disconnect with U.S. society (developed world) between what happens to trash after it gets tossed ‘near’ trash cans (I’ve done my part...)
 - Understanding the economic impact of trash and litter

(15-20 minutes) Reflective Questions:

Your reaction to the information you heard yesterday....

Trigger questions:

- How did you FEEL at the end of the day.....?
 - Each organization is doing their own thing to seek solutions and not collaborating for a combined strategy for marine debris
 - Disconnect between initiatives trying to solve the challenge of marine debris
 - The toxicity question – what are the priorities for handling toxic challenges? Where should we focus our energies when looking at toxicity and transfer?
 - There's more plastic coming down the pipe
 - Tackling totality of M.D. is challenging
 - “Size Matters” concept in regards to plastic
 - Can only eat an elephant one bite at a time
 - We can collaboratively and collectively solve and prioritize
 - Relatively low-hanging fruit
 - A lot of solutions not being utilized
 - What defines “access” for being able to recycle?
 - Cities = curbside
 - Rural = depot

- Perception/acceptance of recycling is valuable
- Waste management is a local and economic issue
- Coffee chains use recyclable foam cups, but public perception is that the foam cups are not recyclable

Let's take a look at implementation of a Marine Debris Management Plan.

Trigger Questions:

- What role do you see yourself playing in the solution to the marine debris problem?
- What do we need to do or change to be on the right track in VA?
- What are the main steps in moving forward?
- What resources are needed?
- Who else should be involved and why?
 - How much infrastructure is already in place to prevent trash from entering the waterways
 - Logistics of capturing debris
 - Need for accurate definition of 'waste' and 'trash'
 - Waste is trash not properly disposed
 - We can technically recycle anything, but it's the economics to make it viable that create challenges
 - Need baseline assessments for trash in the waterways
 - Assessment of existing programs involved with litter and trash removal
 - Alice Ferguson Foundations makes assessment reports for Anacostia River clean-ups each year
 - Make GIS map for where clean-up projects are already taking place
 - Land-based prevention and reduction strategies
 - Celebrate success
 - If all things are "recyclable" then the costs for recycling should be factored into the entire life cycle of the product from manufacture to recycling
 - Life cycle analysis does not consider end-of-life impacts in the environment and marine environment
 - Need to quantify end of life impacts on marine environment
 - We need standards for recycling
- Who else needs to be involved?
 - Fishermen
 - Recreational boat owners
 - County agencies
 - VACO (Virginia Association of Counties) and VML (Virginia Municipal League)
 - Schools
 - Retail and Restaurants
 - National Recycling Coalition
 - Waste Management, Inc.
 - Engage outside states that have implemented programs for guidance on how to develop a state plan

Balloons, Butts and Special Concern Items

Pre-action Item discussion

- **Images or concepts that Stood out**
 - Balloons-Warfare
- Albatross-Stomachs
- Leaching plastic containers
- Bags—recycling process
 - TREX- process/valid
- Issue of biodegradable plastics
- Green event RRR model participation
- Unintended consequences
 - Ban cigarettes to address the concentration of butts
- Balloon data tracking
- Midway Albatross Images how to promote
- Bags look like jelly fish
- Animals entangled
- Pushing recycling when we need to rethink & refuse
- Waster hierarchy and prevention—keep in mind
- Start thinking differently
- Balloons the “new” poster child?
- Lots of research but lots missing
- Surfers and paddlers on the ground
- Resources from Feds like the NOAA MD Program

What’s Missing

- Where does litter come from?
 - Untarped—Don’t go topless
- More enforcement
- More datasharing
 - KAB data, resources and protocols
 - OC-CC data state or items
- Litter.org—sharing
 - Central repository—NOAA MD
 - Spatially located
 - Share and post data—two way
 - State/local/fed/NGOs
- Common vocabulary—how to address
 - Both sides marine and land
 - Look at wiki
 - Articulate needs and expectations to web owners
- Identify pristine areas for benchmarks
- Green events use as a means to benchmark
- Adopt and spot model and NOAA protocol
- Connect land and aquatic and processes and impacts--SWM

Appendix C7—Notes Collected in Template

	Fishing Gear	
Responsible Party	Action	Timeframe
Choose WHO.	Educate and dispel urban myths about abandoned fishing gear – kids learn from parents	Short (<12 months)
Choose WHO.	Incorporate marine debris education in boater education classes and other professional association meetings - perhaps when watermen or recreational fishermen apply for a license – develop on-line or written quiz for an incentive (locations for education and incentives – retailers, marinas – e.g., Bass Pro, West Marine, Walmart) and Boat US Foundation	Short (<12 months)
Choose WHO.	Encourage/explore (require?) the expanded use of biodegradable hatches on crab pots – work with industry or target manufacturer – how to when you make your own pots	med (12mos-3yrs)
Choose WHO.	Encourage watermen to report loses of crab pots and other derelict fishing gear	Short (<12 months)
Choose WHO.	Fund more clean-up efforts (legal issues)	med (12mos-3yrs)
	Continued collection of derelict crab	Short

	pots (financial incentives and enforcement)	term
Choose WHO.	Explore enforcement and legal issues of abandoned pots with identification still on them (barrier is low number of marine patrol officers available)	Short (<12 months)
Choose WHO.	Continue and expand the fishing line recycling program	Short (<12 months)
Choose WHO.	Educate/Explore/Research/Encourage/Develop use of biodegradable fishing line	med (12mos-3yrs)
Choose WHO.	Educate about fishing net use and net avoidance	Short (<12 months)
Choose WHO.	Place identification tags on clam nets on the Eastern Shore	Short (<12 months)
Choose WHO.	Follow progress (encourage implementation) of shellfish BMPs	Short term
Choose WHO.	Notify boaters about the location of aquaculture leases and cages (not only on the Internet – unreadable PVC markers)	Short term
Choose WHO.	Prioritize the impact of recreational and commercial fishing gear debris (where do we put our emphasis?)	Short term
Choose WHO.	Invite additional partners to the table (commercial watermen, recreational	Short term

	fishermen, agriculture, marine police, CBF and other water groups, boaters, marinas, VDOT, Coast Guard, boat manufacturing industry and retail businesses, waste management and disposal companies, Ducks Unlimited and duck hunters, AG or attorneys, JAG, environmental planners)	
Choose WHO.	Develop and publicize the economic (and environment) impact loss data – HR Green, VIMS, PDCs	Short term
	Explore methods to obtain permission and gain access for clean ups in areas un-accessible (shallow), difficult to reach (military)	
	Create new methods to clean up less accessible areas	
	Determine property ownership of clean-up areas	
	Identify ownership of and responsibility for trash	
	Methods for gaining access (private or government properties)	
	Additional Topics: Storms and tornado debris Drinking and marine debris Ammunition and fireworks Incentives for crab pot debris Cigarette butts in and around boats and	

	marinas	
	Take advantage of resources from Boat USA and KAB	
	Encourage paddlers/fishers to carry pocket knives or scissors to clip line	

	Single Use Plastics	
Responsible Party	Action	Timeframe
NGO	Put pressure on brand owners to use proper recycling labels	med (12mos-3yrs)
Other	Monitoring with intent and purpose. [Partner depends on what is being monitored; most likely Gov't and NGO; Alice Ferguson Foundation]	long (>3yrs)
NGO	Appropriate education to take action for defined audiences [look at Alice Ferguson Foundation; Keep America Beautiful models]	med (12mos-3yrs)
NGO	Marketing to elicit action [Washed Ashore's Every Action Counts; The Ocean Project]	med (12mos-3yrs)
NGO	Implement the Keep America Beautiful "Littering is Wrong Too" campaign [Alice Ferguson	Short (<12 months)

	Foundation has a host of resources available]	
State	Systematic strategic planning process at the State (Virginia) and Regional Level. What are the big issues? What are the priority opportunities? Goals? Available Resources? Key Players? Deliverables? Barriers to success. Do assessment homework first.	Short (<12 months)
Academic	Host consortia of expertise on Trash Free Waters to develop strategic plan. [Clean Virginia Waterways]	Short (<12 months)
State	Encourage Virginia Junior Academy of Science and Virginia Academy of Science to focus research on Marine Debris. [Virginia Office of Environmental Education and Dept of Education]	med (12mos-3yrs)
State	Radically expand Environmental Education activities by state agencies.	Short (<12 months)
Planning Districts	Strategy for removal of existing debris/trash.	Short (<12 months)
State	Explore/document existing regulatory actions that impact	Short (<12 months)

	marine debris. [nests within assessment process as part of strategic plan development]	
Choose WHO.		

Butts, Balloons and Special Concern Items		
Responsible Party	Action	Timeframe
Choose WHO.	Storm Debris Management (flooding) – Engaging local governments; disposal of organic/inorganic material policy; research of salt concentrated (contaminated) materials	Specify timeframe
Other	Education to include the connections between land and water via storm drain; motivate to change behavior; involve schools and MWEE	Specify timeframe
Choose WHO.	Balloon campaign – multilevel comprehensive education program; offer alternatives and legacy; collaborating with the balloon industry	Specify timeframe
Choose WHO.	Change statutes regarding balloon releases and increase	Specify timeframe

	enforcement; have JLARC do regulator review	
Choose WHO.	Increased penalties for litter; review penalty levels and connect to enforcement via committee	Specify timeframe
Federal	Promote central repository marine debris clearing house; NOAA marine debris	Short (<12 months)
State	Engage local governments for cleaning –up derelict vessels and structures; identify funding streams; public/private rights/policy; VMRC has derelict vessel program for boats in water	Specify timeframe
Choose WHO.	Establish marine debris monitoring sites for the purpose of ongoing data collection and use as public awareness tool/educator tool	Specify timeframe
Choose WHO.	Establish water quality standard for nicotine and other plastic chemical additives	Specify timeframe
Choose WHO.	Promote balloon litter study and engaging more citizens as citizen scientists	Specify timeframe
NGO	Investigate impacts of used fireworks as litter source	Short term
Choose WHO.	Increased adoption of storm drains by neighborhoods (Adopt-	

	A-Drain)	
Choose WHO.	Education on refusing/reducing/responsible use of plastic bags; promote BYOB (bring your own bag)	
Choose WHO.	Research and promote health/economic effects of plastics and other litter outgasing/leaching	
Choose WHO.	One year review session	
	Create a survey via social media to identify alternatives to balloon releases	
	Define packages of ads thrown onto private properties as litter (review ordinances)	
	Consider statewide bag ban or fees for use; talk with lesgislators	
	Identify hotspots for cigarette butt littering; identify incentives for providing receptacles; review ordinances and conversations with hotspot owners	

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