

*Marine Debris Reduction Activities:  
Status & Future Needs*

Katie Register, Executive Director  
Clean Virginia Waterways

Virginia CZM Program  
Partners Meeting.  
December 10, 2014



Kemp's Ridley, Fisherman Island, VA 2014

# Marine debris is ...

...any persistent **solid material** that is **manufactured or processed** and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes.

– NOAA Marine Debris Program

# Assessment highlights

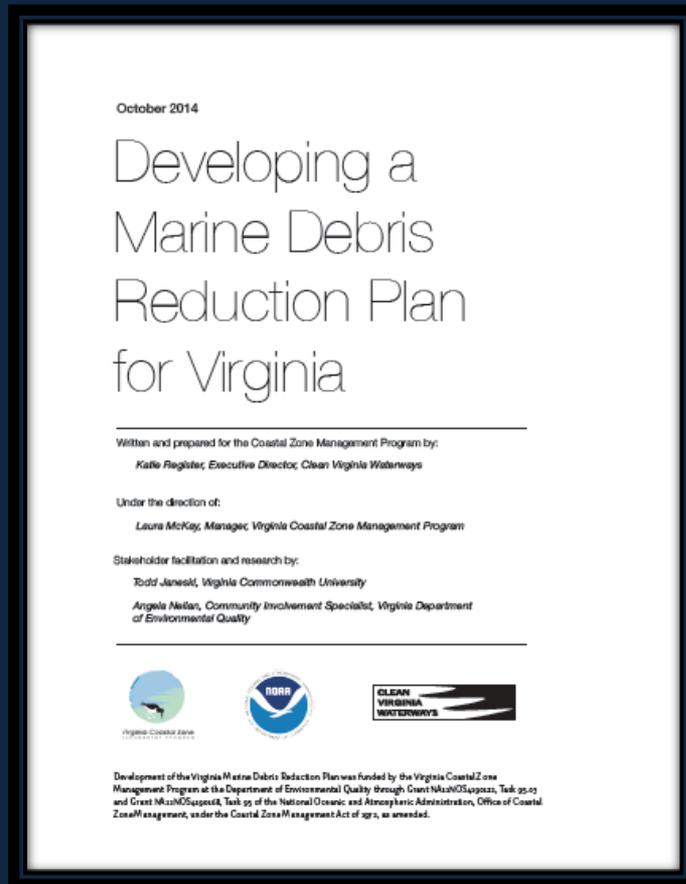
Source of Marine Debris	Existing Status and Trends of Marine Debris in Coastal Zone		
	Significance of Source (H, M, L, unknown)	Type of Impact <sup>1</sup> (aesthetic, resource damage, user conflicts, other)	Change Since Last Assessment (+, -, -, unknown)
<i>Land-based</i>			
Beach/shore litter	H	Aesthetic, economic, human health/safety, wildlife/habitat, resource damage	—
Dumping	M	Aesthetic, economic, human health/safety, wildlife/habitat, resource damage, user conflict	—
Storm drains and runoff	H	Aesthetic, economic, human health/safety, wildlife/habitat, resource damage	—
Fishing (e.g., fishing line, gear)	L to M	Aesthetic, economic, human health/safety, wildlife/habitat, resource damage	—
Other (balloons litter)	M	Aesthetic, wildlife/habitat, resource damage	

# Assessment highlights

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<i>Ocean-based</i>			
Fishing (e.g., derelict fishing gear)	H	wildlife/habitat, resource damage, boating safety	—
Derelict vessels	M	Aesthetic, boating safety, resource damage, user conflict	—
Vessel-based (e.g., cruise ship, cargo ship, general vessel)	Unknown	Aesthetic, wildlife/habitat, resource damage	—
Hurricane/Storm	M to H	Aesthetic, economic, human health/safety, wildlife/habitat, resource damage	—
Tsunami	Unknown	Aesthetic, economic, human health/safety, wildlife/habitat, resource damage	
Other (please specify)			

What we have done...

# Virginia Marine Debris Reduction Plan



First on East Coast to summarize sources, impacts, gaps of knowledge.

Near-term priorities

Methodology to demonstrate a reduction for a subset of marine debris.

Long-term vision to reduce marine debris

# Developed with stakeholders

- Summit
- Interviews
- Surveys
- Leadership Team



# Virginia Marine Debris Reduction Plan

October 2014

## Developing a Marine Debris Reduction Plan for Virginia

Written and prepared for the Coastal Zone Management Program by:

*Katie Register, Executive Director, Clean Virginia Waterways*

Under the direction of:

*Laura McKay, Manager, Virginia Coastal Zone Management Program*

Stakeholder facilitation and research by:

*Todd Janeski, Virginia Commonwealth University*

*Angela Meilan, Community Involvement Specialist, Virginia Department  
of Environmental Quality*



Development of the Virginia Marine Debris Reduction Plan was funded by the Virginia Coastal Zone Management Program at the Department of Environmental Quality through Grant NA04O3490202, Task 95.03 and Grant NA04O3490202, Task 95 of the National Oceanic and Atmospheric Administration, Office of Coastal Zone Management, under the Coastal Zone Management Act of 1972, as amended.

- Downloadable
- Shorter version to be published soon



# Feasibility

Select the strategies that are:

- Political feasibility
- Social feasibility
- Economic feasibility

Develop implementation strategies for the  
2 or 3 most feasible strategies



# The **Goals** of the VMDRP:

**Lead**

**Prevent**

**Intercept**

**Innovate**

**Remove and Clean Up**



# The **Strategies** of the VMDRP are

**Changing behaviors**

**Fostering collaboration**

**Increasing knowledge**

**Securing adequate funding**

**Improving regulations**



# 2014-2016 Action Items

1. Establish the Virginia Marine Debris Advisory Committee.



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2. Develop and implement a balloon use social marketing campaign.
3. Review existing and potential legislation and regulatory tools that will help minimize some of the most common and harmful items found as marine debris.



# 2014-2016 Action Items

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2. Develop and implement a balloon use social marketing campaign.
3. Review existing and potential legislation and regulatory tools that will help minimize some of the most common and harmful items found as marine debris.
4. Identify existing and potential revenue streams to sustain statewide marine debris and litter prevention.



# International Coastal Cleanup in Virginia

Top 20 items in 19 years

# 19 years of ICC data in Virginia

	1995-1999	2000-2004	2005-2009	2010-2013
1	Cigarettes/Cigarette Filters	Beverage Bottles (Plastic)	Cigarettes/Cigarette Filters	Cigarettes/Cigarette Filters
2	Bags	Cigarettes/Cigarette Filters	Beverage Bottles (Plastic)	Beverage Bottles (Plastic)
3	Cups, Plates, Forks, Knives, Spoons	Beverage Bottles (Glass)	Food Wrappers/Containers	Food Wrappers/Containers
4	Food Wrappers/Containers	Food Wrappers/Containers	Bags	Bags
5	Beverage Cans	Beverage Cans	Beverage Cans	Beverage Cans
6	Caps, Lids	Bags	Beverage Bottles (Glass)	Cups, Plates, Forks, Knives, Spoons
7	Beverage Bottles (Glass)	Cups, Plates, Forks, Knives, Spoons	Cups, Plates, Forks, Knives, Spoons	Beverage Bottles (Glass)
8	Beverage Bottles (Plastic)	Caps, Lids	Caps, Lids	Caps, Lids
9	Straws, Stirrers	Straws, Stirrers	Straws, Stirrers	Straws, Stirrers
10	Building Materials	Balloons	Building Materials	Tires
11	Balloons	Building Materials	Clothing, Shoes	Building Materials
12	Rope	Clothing, Shoes	Tobacco Packaging/Wrappers	Toys *
13	Clothing, Shoes	Tobacco Packaging/Wrappers	Balloons	Tobacco Packaging/Wrappers
14	Fishing Line	Toys	Fishing Line	Cigar Tips
15	Oil/Lube Bottles	Fishing Line	Bait Containers/Packaging	Clothing, Shoes *
16	Tires	Bait Containers/Packaging	Cigar Tips	Fishing Line **
17	Toys	Rope	Toys	Strapping Bands
18	Buoys/Floats	Cigarette Lighters	Tires	Balloons
19	Cigarette Lighters	Oil/Lube Bottles	Rope	Rope
20	Six-Pack Holders	Pull Tabs	Pull Tabs	Bait Containers/Packaging *

# Balloons as Litter Study





# Weddings, funerals, ceremonies





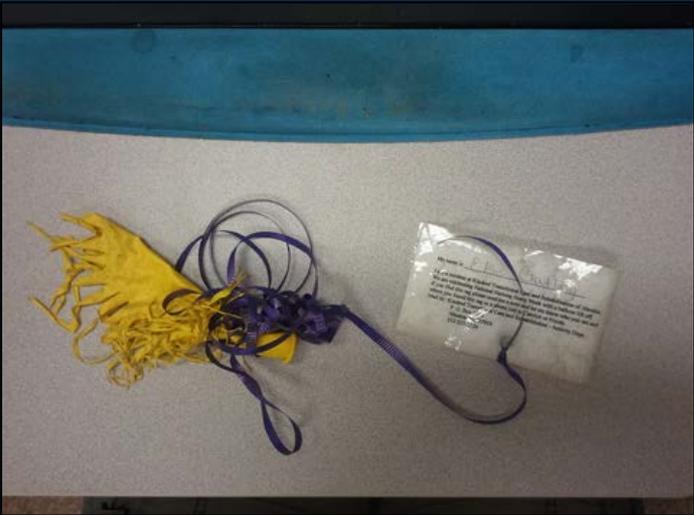
Impacts –  
entanglement



# Impacts – ingestion



# Balloons as Litter: Attachments



# Virginia Litter Study

Single Balloon Report - virg...

File Edit View Favorites Tools Help

virginiaballoonstudy Search this site

Home  
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Multiple Balloons Report  
**Single Balloon Report**  
Sitemap

## Single Balloon Report

If you have found a single balloon, please choose one of the forms below, based on the type of balloon that you have found.

**Fill out this form if you have found a latex balloon**



**Fill out this form if you have found a foil balloon**



### Latex Balloon

If you have found a latex balloon, please fill out the following form and check the option which best describes the latex balloon that you found.  
**\* Required**

**Name \***

**Email \***

**Phone Number**  
We will only call regarding this form if necessary

**Date \***  
Please enter the date in which you found the balloon.

**Location \***  
Please give a detailed description of where you found the balloon, include a gps location if possible. Also, please describe type of area, ie. stream, beach, woods, etc.

### Foil Balloon

If you have found a foil balloon, please fill out the following form and check the option which best describes the foil balloon that you found.  
**\* Required**

**Name \***

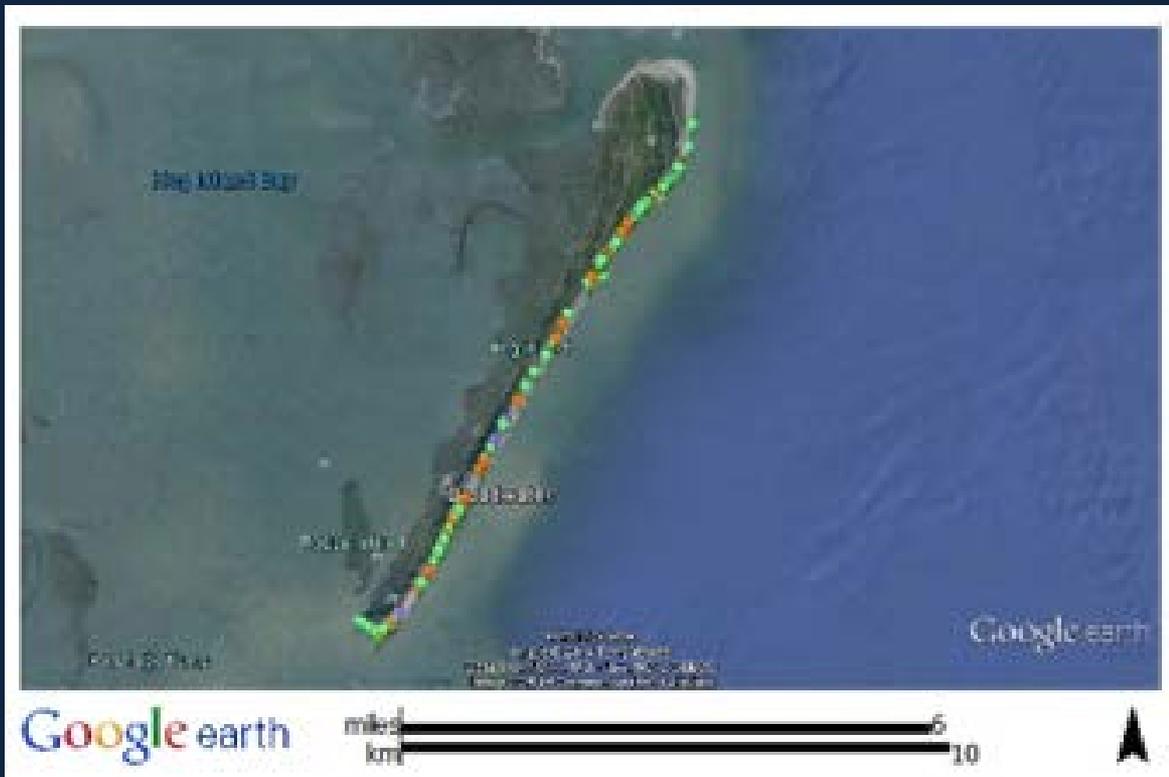
**Email \***

**Phone Number**  
We will only call regarding this form if necessary

**Date \***  
Please enter the date in which you found the balloon.

**Location \***  
Please give a detailed description of where you found the balloon. Also include if found on a waterway, in a tree, etc.

9:38 AM  
2/25/2013



Hog Island, June 5, 2013  
Approximately 7 miles  
168 Balloons  
24 Balloons per mile

# VA Marine Debris Location & Removal Program: Crab pots in the Chesapeake Bay & VA coastal waters

VIMS trained and employed commercial fishermen to remove lost and abandoned crab pots from Virginia's coastal waters and the Chesapeake Bay – pots that would otherwise continue to capture and kills crabs and fish.



# Clam netting from aquaculture operations

Plastic clam netting used in aquaculture operations to protect clams from predators ...

...can become marine debris when cut by boat propellers, moved by storms, or discarded inappropriately.



# Monitoring Marine Debris in Virginia's Coastal Zone

January 2014 through March 2015



Monthly data collection on the quantities and types of marine debris found at:

- Chincoteague National Wildlife Refuge
- Fisherman Island National Wildlife Refuge
- Back Bay National Wildlife Refuge
- Grandview Nature Preserve in Hampton



# Protocol

Marine Debris Monitoring &  
Assessment Project (MD-MAP)  
Field Survey Data Collection Site.

<http://md-map.net>



## NOAA Marine Debris Shoreline Survey Field Guide

Sarah Opfer, Courtney Arthur, and  
Sherry Lippiatt



U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
National Ocean Service  
Office of Response and Restoration  
Marine Debris Program

January 2012

# Social Marketing & Balloons

- Social marketing
  - Integrates marketing concepts to influence behaviors that benefit the greater social good.
  - Successfully change behaviors
- This serves several priorities in the Virginia Marine Debris Reduction Plan



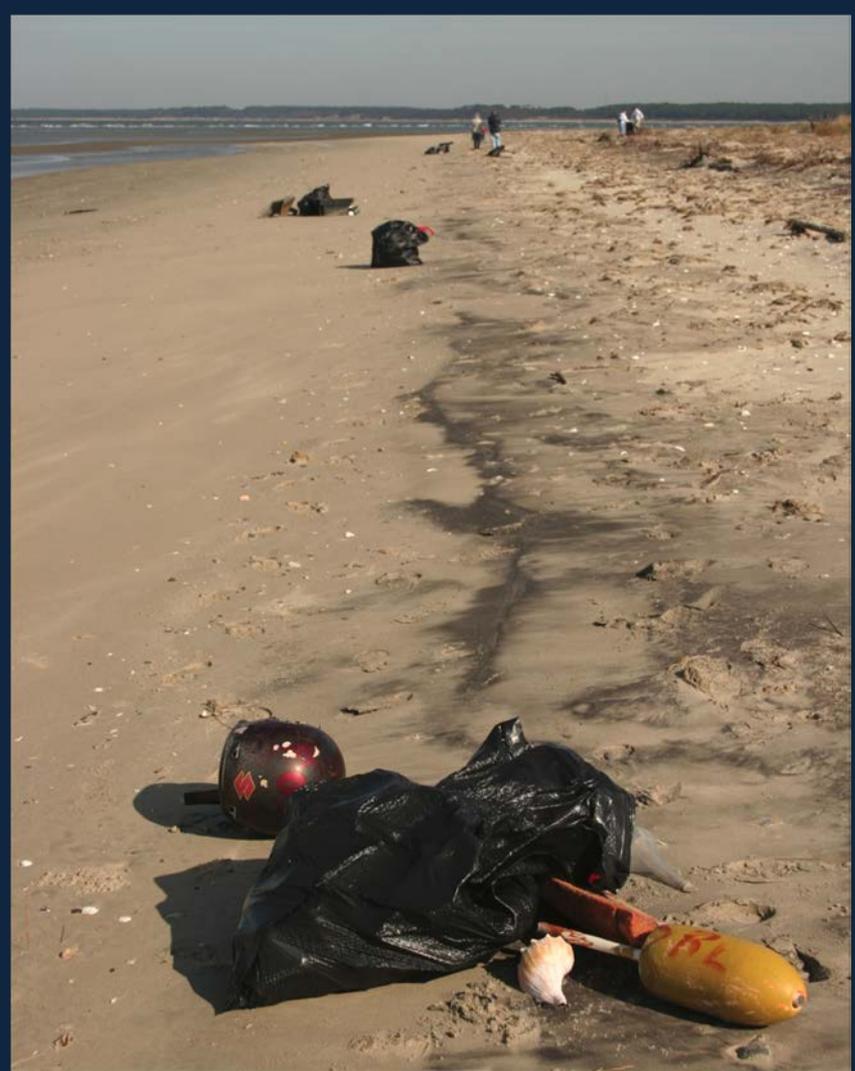
A final word...

Momentum!



[www.longwood.edu/cleanva](http://www.longwood.edu/cleanva)

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Fisherman Island, Virginia. Photo by Christina Trapani



# Virginia Coastal Zone

MANAGEMENT PROGRAM

**CLEAN  
VIRGINIA  
WATERWAYS**

*Of Longwood University*