

Virginia Marine Debris Reduction Plan Refinement & Implementation of Balloon Reduction Social Marketing Campaign

Submitted to the Virginia Coastal Zone Management Program by Katie Register, Executive Director, Clean Virginia Waterways of Longwood University.

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The Virginia Coastal Zone Management Program is a network of state agencies and coastal localities. The Virginia Department of Environmental Quality serves as the lead agency for the network.



PROJECT SUMMARY

Virginia Marine Debris Reduction Plan Refinement & Implementation of Balloon Reduction Social Marketing Campaign

Having provided leadership in the development of the Virginia Marine Debris Reduction Plan (funded under FY11 Task 95.03), the Virginia Coastal Zone Management Program (VA CZM) provided funding in FY15 to Clean Virginia Waterways of Longwood University (CVW) to support the refinement of the Virginia Marine Debris Reduction Plan and further implementation of the balloon reduction social marketing campaign.

About the Virginia Marine Debris Reduction Plan

The Virginia Marine Debris Reduction Plan serves as a roadmap for nonprofit organizations, local governments, state agencies, regional partners, researchers, and industry as they work together on sustained approaches to reducing the flow of plastic trash and other trash items into our coastal waters.

The Virginia Marine Debris Reduction Plan utilizes multiple approaches. Solutions to marine debris will come from a combination of:

- Behavior change campaigns;
- Policies and enforcement;
- Increased responsibilities of producers, manufacturers and distributors;
- Informed consumers;
- Acceptable and readily available substitutes (e.g., fabric shopping bags);
- Increased infrastructure to capture materials at sources and increase “ease” in doing the right thing with waste items

In addition, this grant supported further implementation of a social marketing campaign titled “*A Rising Concern: Reducing Balloon Release and Debris through a Social Marketing Campaign.*”

Deliverables for this grant included:

1. Refinement and Implementation of Phase 2 of the Virginia Marine Debris Reduction Plan
2. Evaluation, Supplies and Final Report for “*A Rising Concern: Reducing Balloon Releases and Debris through a Social Marketing Campaign*”
3. Balloon Debris Monitoring Report
4. 2nd Virginia Marine Debris Summit Report
5. Social Marketing Workshop

Funding for this grant:

This grant was originally funded at \$60,600. An additional \$25,873 was added to the grant in order to pay for the following:

- Deposit for the “Introduction to Community-Based Social Marketing Workshop”;
- Production of two videos about the impacts of balloon litter to support the *Joyful Send-off* campaign;
- Reaching out to brides and wedding vendors at a bridal show in Richmond, VA;
- GPS instruments to support on-going monitoring of coastal beaches for marine debris and balloon-related litter items in Virginia and other Mid-Atlantic states.

Refinement and Implementation of Phase 2 of the Virginia Marine Debris Reduction Plan

During this grant period, progress was made on implementing many aspects of the Virginia Marine Debris Reduction Plan through work described below.

Coordinating the activities of the Virginia Marine Debris Advisory Committee:

The Virginia Marine Debris Advisory Committee met to share ongoing research and outreach projects including work to decrease cigarette litter in Virginia Beach, using biodegradable plastics to make shotgun wads, and reaching state park visitors with strengthen litter-prevention messages. Committee members also contributed to the development of NOAA's Virginia Emergency Marine Debris Response Plan and attended a stakeholders meeting to discuss solutions to derelict clam netting on Virginia's Eastern Shore beaches. Several members contributed to NOAA's new regional portal to share marine debris project information.

Facilitating engagement in implementing aspects of the VMDRP:

The Virginia Marine Debris Reduction Plan (VMDRP) recognizes that education, outreach, regulations, best practices, and behavior change are key to the prevention of marine debris. One of the strategies found in the Virginia Marine Debris Reduction Plan is to "Increase knowledge about effective methods to change behaviors" (**Action 2.3.a**) and another is to "Develop and implement dedicated education and outreach initiatives, tools, and campaigns to encourage changes in behavior and improve efforts to address marine debris. (**Action 2.1.d**).

The following are examples of how Clean Virginia Waterways and the Virginia Coastal Zone Management Program coordinated to increase engagement of NGOs, agencies, the general public, and others in implementing aspects of the VMDRP including the balloon litter prevention social marketing campaign.

- Overviews of the Virginia Marine Debris Reduction Plan were presented to Virginia Coastal Zone Management Partners, Mid-Atlantic Regional Council on the Ocean (MARCO) staff and representatives, as well as the general public at the first annual "Back to the Bay" public outreach event (June 2017).
- Copies of the Virginia Marine Debris Reduction Plan were printed and distributed to attendees of the Mid-Atlantic Social Marketing Workshop, the Mid-Atlantic Marine Debris Workshop, NOAA Virginia Marine Debris Emergency Planning Workshop, and the Garden Club of Virginia Annual Conference and mailed to others as requested.
- Virginia CZM Program's marine debris exhibit was displayed at several public events including the Virginia State Fair.

Mid-Atlantic organizations: Through participation in monthly calls with MARCO staff and members of the Mid-Atlantic Regional Planning Body Marine Debris Work Group, CVW & CZM contributed to discussions about possible regional approaches to prevent or remove marine debris. CVW staff assisted with the research and writing of MARCO's Mid-Atlantic Marine Debris Summary Report and the creation of an inventory of current marine debris prevention programs underway in the Mid-Atlantic. Project staff helped write MARCO's proposal to NOAA's Marine Debris Program for a grant to expand the *Joyful Send-off* campaign in the Mid-Atlantic.

Stormwater managers: Discussions were held with stormwater managers regarding their concerns with "floatable" pollutants including litter and polystyrene pellets from construction sites.

Introduction to Community-Based Social Marketing workshop.

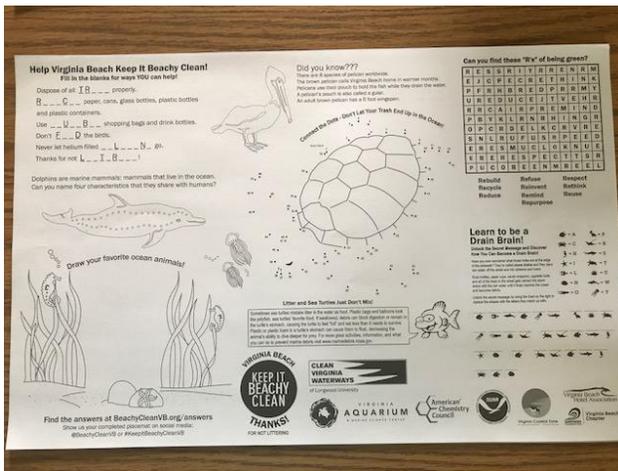
This grant provided partial funding for the June 5-6, 2017 workshop to build the capacity of partners to conduct research and implement campaigns to promote positive environmental attitudes and behaviors and

also increase voluntary compliance with anti-litter laws. The workshop was taught by Dr. Doug McKenzie-Mohr. Additional support for this workshop came from FY16 Task 94.03, and a modest registration fee that covered meals. Representatives from MARCO states, NOAA Marine Debris Program, and other partners attended the workshop and/or a 90-minute executive summary that was offered on the morning of June 6.

Keep It Beachy Clean program:

Part of these grant funds supported the expansion of the “Keep it Beachy Clean” campaign. Clean Virginia Waterways’ “Keeping it Beachy Clean” community outreach program was developed to influence the behaviors of a key target audience: visitors to beach resorts and beach communities. Beachy Clean was piloted in Virginia Beach in 2015 and 2016, focusing mainly on hotels and on the boardwalk. Several meetings were held in Virginia Beach with partners including the Virginia Aquarium, the Virginia Beach Hotel Association, restaurant owners, and a marketing firm that gave pro bono advice.

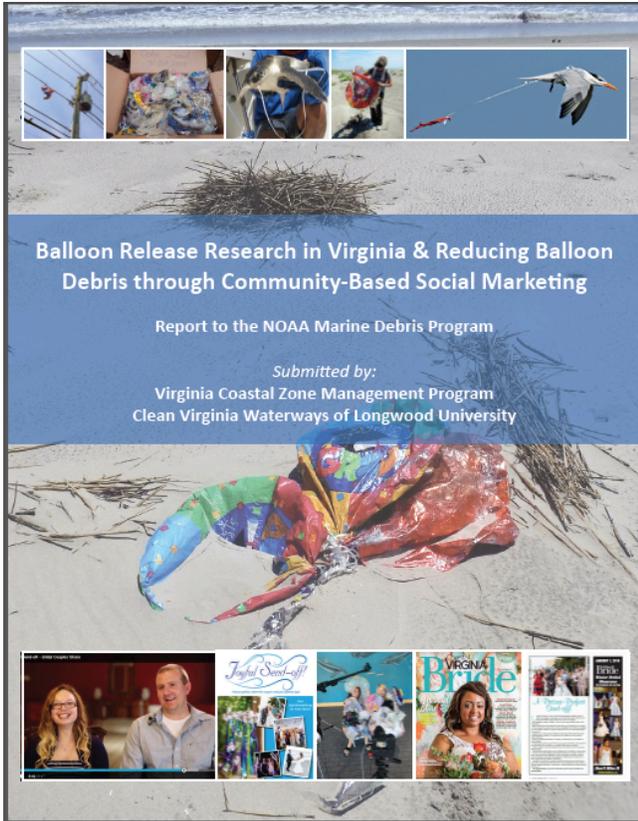
In 2017, the campaign was expanded to reach more visitors to Virginia Beach by working with rental cottages, restaurants, state parks, the Virginia Aquarium, the Virginia Beach Hotel Association, and other partners. The Beachy Clean messages focus on specific actions that beach visitors can take to ensure clean and safe beaches and waters.



Three versions of placemats for children were distributed to restaurants in Virginia Beach. Logos from Keep It Beachy Clean’s major partners are printed on the placemats, including NOAA and the Virginia Coastal Zone Management Program.

The Virginia Marine Debris Reduction Plan recognizes that everyone can help prevent marine debris, but restaurants and retailers could play an especially key role since food- and beverage-related litter are, in aggregate, the largest source of marine debris as determined by data collected by volunteers during the International Coastal Cleanup.

Balloon Release Reduction Campaign: Evaluation and Supplies and Final Report for “A Rising Concern: Reducing Balloon Releases and Debris through a Social Marketing Campaign”



The research done by project partners that led to the creation of the *Joyful Send-off* Community-Based Social Marketing campaign was summarized in the report “*Balloon Release Research in Virginia & Reducing Balloon Debris through Community-Based Social Marketing*” by Virginia Witmer (CZM), Katie Register (CVW), and Laura McKay (CZM). The 117-page report also sums up the campaign’s implementation and evaluation.

Background:
 One of the near-term actions identified in the Virginia Marine Debris Reduction Plan was the design and implementation of a social marketing campaign targeting behaviors that will reduce balloon litter in the marine environment. Balloon litter was identified as one of the most harmful items to wildlife according to international marine debris experts surveyed in 2015. An important secondary goal of the NOAA Marine Debris Grant was to build capacity among partners in developing and implementing future social marketing campaigns that could target common, persistent, and harmful marine debris items such as single use plastic bags, derelict fishing gear, crab pots, microplastics, and cigarette butts.

The Virginia CZM Program received \$50,000 grant from the FY14 NOAA Marine Debris Program to design and implement a social marketing campaign to change behavior and stop mass balloon releases. This FY15 CZM grant supported that NOAA grant, enabling staff to complete the pre-campaign research needed to identify the target audiences for a social marketing campaign and to inform design of the campaign strategy. This grant also purchased supplies for kits which were distributed to people who work for venues where weddings and other celebrations are held. GPS units were purchased from this grant for use in monitoring of balloon-related litter and other marine debris on beaches in the Mid-Atlantic.



A picture-perfect ending to a picture-perfect wedding day.

The resulting campaign – *Joyful Send-off* – encourages wedding send-off activities that provide memorable, joyful, picture-perfect, and litter-free alternatives to balloon releases. The goal is that brides and grooms will learn that all released balloons become litter, and they will not organize or participate in a balloon release in the years to come.

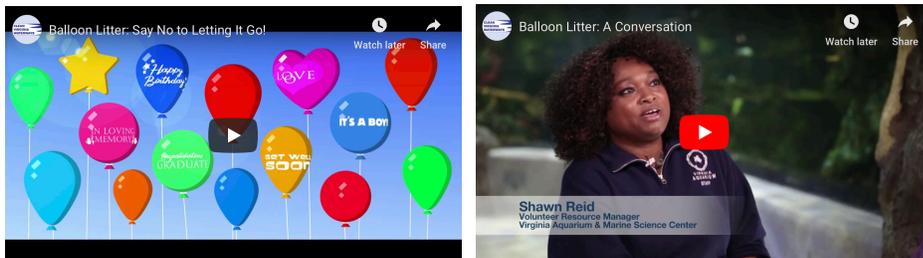
During the pre-campaign process and selection of the first target audience, staff consulted with a multi-partner campaign strategy planning team, including NOAA Marine Debris Program staff, to ensure that the campaign developed would be successful not only in coastal Virginia but also transferrable to other mid-Atlantic states.



Staff also designed a two-page fact sheet that highlights the balloon debris issue. This fact sheet was distributed to various audiences including the 2015 Virginia State Fair and at speaking engagements. It is downloadable on the Virginia CZM web site.

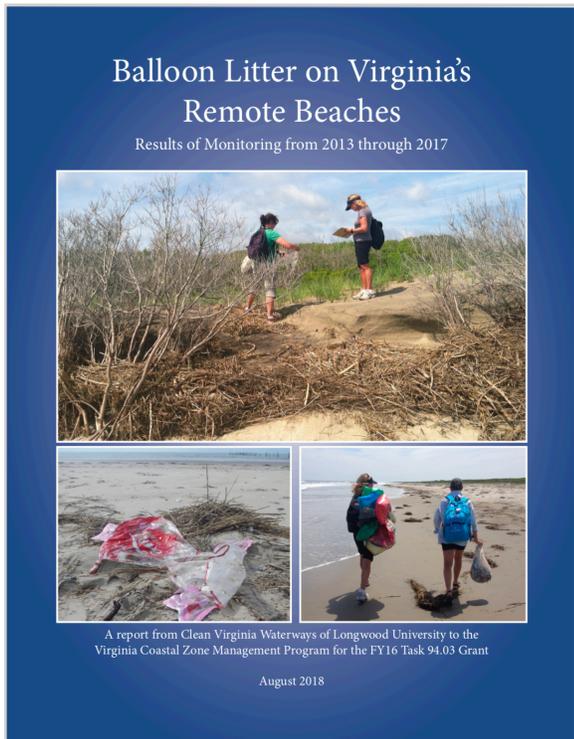
Staff also produced a three-panel display and a panel for an exhibit at the 2015 Virginia State Fair, including a station where visitors could pledge not to release balloons.

This grant funded the creation of two videos that support the *Joyful Send-off* campaign and other efforts to reduce the intentional releasing of helium-filled balloons. Both videos can be viewed on PreventBalloonLitter.org. To imbed the videos in a website, see <https://www.youtube.com/channel/UC79VQJ1IkeGbKJDT-6owRyw>



The full “*Balloon Release Research in Virginia & Reducing Balloon Debris through Community-Based Social Marketing*” report can be downloaded from: <https://www.deq.virginia.gov/Programs/CoastalZoneManagement/CZMIssuesInitiatives/MarineDebris/MarineDebris-Balloons.aspx> and also from: www.longwood.edu/cleanva/publications.html

Balloon Debris Monitoring Report



An extensive report by Christina Trapani, Kathy O’Hara and Katie Register entitled “*Balloon Litter on Virginia’s Remote Beaches*” was submitted to the Virginia Coastal Zone Management Program in August 2018.

Background:

Prior to the beginning of this grant, Clean Virginia Waterways and the Virginia Aquarium implemented a “Balloon Litter Study” throughout Virginia using citizen science data collection and reporting. In 2013, marine debris researchers Kathy O’Hara and Christina Trapani began to monitor barrier islands and remote beaches for balloon litter to ground-truth the data that was being reported by citizens.

As work got underway on the “*Reducing Balloon Release and Debris through a Social Marketing Campaign*,” additional monitoring of Virginia beaches for balloon litter was undertaken supported by this grant. Continued monitoring prior to, during, and after implementation of the pilot campaign of the types, quantities and sources (where possible) of balloons found in the coastal areas was conducted to help measure/evaluate the effectiveness of the campaign.

As part of this grant, Christina Trapani and Kathy O’Hara were sub-contracted by CVW to conduct accumulation surveys of balloon litter at five sites in order to better understand the abundance, distribution, accumulation and fate of balloon litter in coastal environments of Virginia. Sites were: Smith Island, Hog Island, Fisherman Island, Cedar Island, and False Cape State Park. Permits and/or written permissions from land owners were obtained as needed. Each site required up to two days of monitoring depending on litter quantities and tide constraints. Restrictions during nesting season and tide constraints helped determine monitoring dates. During some surveys, the quantity of balloon litter was compared to the amount of all other litter types present. GPS coordinates were recorded, and photos were taken of each balloon or balloon group *in situ*.

One intent of this research was to help measure/evaluate the effectiveness of the Community-Based Social Marketing research to decrease the intentional mass release of balloons through the “*Joyful Send-off*” campaign. The research about the accumulation of balloon litter in coastal environments can help inform mitigation efforts to prevent balloon releases through education and social marketing campaigns as well as changes in policies and laws.

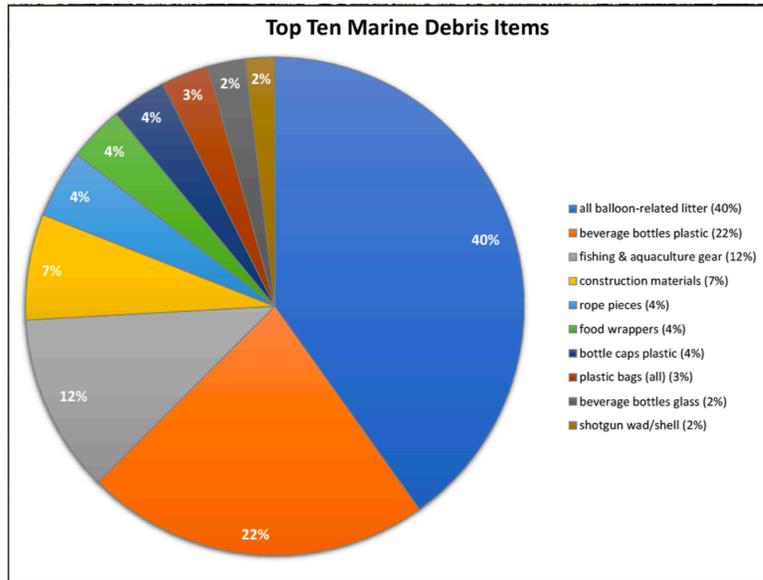


Data collected on each balloon included the following:

- Balloon type (foil, latex, ribbon only, other)
- Color and shape
- Ribbons and other attachments
- Condition (burst, deflated, nub, piece)
- Location on beach (low, mid, high)
- Other notes (occasions, business names, foil balloon numbers, etc.)

Some key findings in the report are:

- When compared to other trash, balloons ranked as the #1 top marine debris item on the beaches.
- During the five-years of monitoring (2013-2017) a total of 11,441 balloons and balloon-related pieces of litter (e.g., plastic ribbons) were recorded.
- Most balloon litter (61%) was concentrated on the highest sections of the beach, which is critical habitat for nesting turtles and birds.
- Balloon litter density varied from 25.6 items per mile on Cedar Island in the winter, to more than 272 items per mile at Fisherman Island National Wildlife Refuge in summer and fall.



The report can be downloaded from:

<https://www.deq.virginia.gov/Programs/CoastalZoneManagement/CZMIssuesInitiatives/MarineDebris/MarineDebris-Balloons.aspx> and also from:
www.longwood.edu/cleanva/publications.html

2nd VA Marine Debris Summit Report

CVW and CZM staff wrote and submitted a report that summarized the 2nd VA Marine Debris Summit and included input from the attendees.

Background:

CVW coordinated with VA CZM staff, VIMS and members of the VA Marine Debris Advisory Committee to plan all aspects of the 2nd VA Marine Debris Summit held March 7-9, 2016 at VIMS in Gloucester, Virginia. A total of 116 marine debris experts, state and local resource managers, and community educators attended the Summit to learn about the early accomplishments of the Virginia Marine Debris Reduction Plan, share ongoing research, and explore emerging issues.

Representatives from other MARCO states and DC also attended the Summit to discuss regional approaches to marine debris sources, impacts, and mitigation.

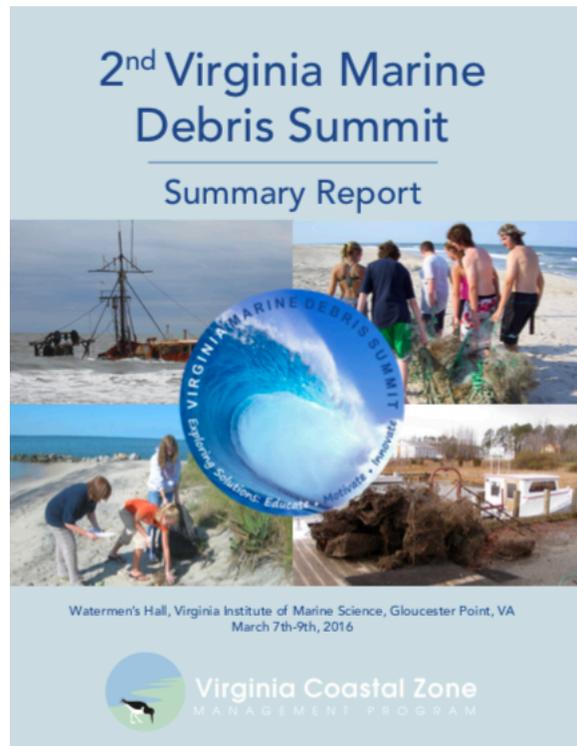
Media coverage: 3 reporters attended portions of the Summit and interviewed speakers including the keynote speaker, David Paylor, VA DEQ Director. The summit and marine debris issues were covered on several radio stations and in local newspapers. Post-summit activities included a post-summit survey; summary of the key findings from the Summit (especially the “Deep Dive” discussions); and creation of a web site to share presentations and handouts.

The full report can be downloaded here:

(<http://www.deq.virginia.gov/Programs/CoastalZoneManagement/CZMIssuesInitiatives/MarineDebris/2016VirginiaMarineDebrisSummit.aspx>) and also from:
www.longwood.edu/cleanva/publications.html

Prior to the 2nd Virginia Marine Debris Summit, Katie Register (CVW) worked closely with Laura McKay and Virginia Witmer of the VA CZM Program to write, design, and produce a 20-page booklet entitled the “*Virginia Marine Debris Reduction Plan: Summary & Look Ahead.*”

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



Social Marketing Workshop

This grant paid the deposit for the “Introduction to Community-Based Social Marketing” workshop (June 5-6, 2017 in Richmond) taught by Dr. Doug McKenzie-Mohr, founder of community-based social marketing and author of *Fostering Sustainable Behavior*. The workshop was funded partly by this grant, partly by FY16 Task 94.03, and partly by a modest registration fee to cover meals. Representatives from MARCO states, NOAA Marine Debris Program, and other partners attended the workshop and/or a 90-minute executive summary.

The workshop met a goal of the Virginia Marine Debris Reduction Plan: to build the capacity to conduct research & implement campaigns to promote positive environmental attitudes and behaviors and also increase voluntary compliance with anti-litter laws.