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

Final Report for FY14 Grant
Submitted to the Virginia Coastal Zone Management Program
by Katie Register, Executive Director, Clean Virginia Waterways of Longwood University

Virginia Coastal Zone
MANAGEMENT PROGRAM

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PROJECT SUMMARY

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 provided funding in FY14 to Clean Virginia Waterways of Longwood University to support the refinement and Phase 1 implementation of 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 the design and implementation of a social marketing campaign titled "*A Rising Concern: Reducing Balloon Release and Debris through a Social Marketing Campaign."*

This report is divided into three sections:

A. Refinement and Implementation of the Virginia Marine Debris Reduction Plan (Grant Product #1) – Page 4

B. Design and Implementation of a Social Marketing Campaign Titled "*A Rising Concern: Reducing Balloon Release and Debris through a Social Marketing Campaign"* (Grant Products 2 and 3). This includes conducting pre-campaign qualitative and quantitative research and production of campaign strategy multi-media materials. – Page 17

C. Monitoring balloon debris (Grant Product 4) – Page 23

A. Refinement and Implementation of the Virginia Marine Debris Reduction Plan

Having created the Virginia Marine Debris Reduction Plan through a consensus process, the Virginia Coastal Zone Program is committed to maintaining a leadership role in its implementation. During this grant period, progress was made on implementing many aspects of the Virginia Marine Debris Reduction Plan through work described below.

Sub-Sections:

1. Virginia Marine Debris Reduction Advisory Committee
2. Engaging Partners & Raising Awareness About the Virginia Marine Debris Reduction Plan and Preventing Marine Debris
3. Policy Development Regarding Balloon and Sky Lantern Releases
4. "Keep it Beachy Clean" Campaign
5. Restaurant Outreach Regarding Single-Use Food and Beverage Items
6. Video for Recreational Boaters Regarding Preventing Marine Debris
7. Potential Future Fee and Tax Structures in Virginia Related to Litter and Recycling
8. Marine Debris Items of Concern: Other Activities

1. Virginia Marine Debris Reduction Advisory Committee

During the first meeting of the Virginia Marine Debris Advisory Committee in Richmond on March 23, 2015, mid-term (2017-2020) priorities for the Virginia Marine Debris Reduction Plan (VMDRP) were determined based, in part, on input gathered through an on-line survey of committee members.

Mid-term priorities for 2017-2021

Program Leadership

- Collaboration: Foster coordination, cooperation, and communication among government agencies (federal, state and local), nonprofit organizations, research institutions, industry, and consumers.
- Collaboration: Create, maintain, and share inventory of current litter-prevention and marine debris projects, best practices, and research.
- Collaboration: Use web-based tools to foster collaboration, increase internal and external communication, and track implementation of VMDRP.
- Change Behaviors: Examine ways to work around the many silos of current activities and change management behavior to be more collaborative.

Prevention of marine debris

- Increase Knowledge: Analyze ecological and economic impacts of litter and marine debris to Virginia's tourism revenue, recreational spending, and property values, and economically important species.
- Change Behaviors: Develop and implement dedicated education and outreach initiatives, tools, and campaigns to encourage changes in behavior and improve efforts to address marine debris
- Fund: Seek funding to support local community-based marine debris prevention projects that benefit coastal habitat, waterways, and wildlife.
- Increase Knowledge: Increase knowledge about effective methods to change behaviors.
- Collaboration: Create a clearinghouse of marine debris prevention activities, tools, and resources.

- Collaboration: Develop regional approaches – when and where possible.

Reduce marine debris by intercepting litter at storm drains

- Change Behaviors: Assess trash interception practices in MS4 and non-MS4 permitted localities and facilitate cross-departmental communication to support effective litter and marine debris education and management.

Innovate

- Increase Knowledge: Conduct, promote, & sponsor collaborative research on successful social marketing campaigns that target common, persistent, & harmful marine debris (e.g., balloons, plastic bags, lost & derelict fishing gear, crab pots, cigarettes).
- Change Behaviors: Promote the adoption of innovative practices & behaviors that will lead to a reduction in litter & lost fishing gear – through media attention, educational opportunities, and partnerships with academic institutions, NGOs & govts
- Increase Knowledge: Conduct, promote, & sponsor collaborative research on successful social marketing campaigns for targeting specific audiences (recreational or commercial fishing communities, economically disadvantaged communities, etc.
- Collaboration: Influence innovation through collaboration between government, non-governmental organizations and industry in Virginia and the Mid-Atlantic region.

It was decided that, for the time being, the Advisory Committee should be comprised of marine debris experts rather than policy makers, although policy makers will be important contributors to some aspects of the Virginia Marine Debris Reduction Plan implementation in the future.

Virginia Marine Debris Reduction Plan Advisory Committee

LeAnne Astin, Ecologist II**,** Stormwater Planning Division**,** Fairfax County

Donna Bilkovic, PhD., Research Associate Professor, Virginia Institute of Marine Science

John W. Deuel, Environmental Sustainability Consultant, GreenQuest

Kirk J. Havens, PhD, Director, Coastal Watersheds Program**,** Asst. Director, Center for Coastal Resources Management**,** Virginia Institute of Marine Science

Nicholas Mallos, Conservation Biologist, Marine Debris Specialist**,** Ocean Conservancy

Laura McKay, Manager, Virginia Coastal Zone Management Program

Geralyn Mireles, Wildlife Biologist**,** Back Bay National Wildlife Refuge

Alicia Nelson, Fisheries Management**,** *Virginia Marine* Resources Commission

Kathy O'Hara, Marine Debris Researcher & Consultant, Virginia Aquarium Stranding Response Program

Susan Park, PhD, Assistant Director for Research**,** Virginia Sea Grant**,** Virginia Institute of Marine Science

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

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Kathy Russell, Education and Outreach Coordinator**,** TFC Recycling

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Anne Smith, Virginia Clean Marina Program**,** Virginia Institute of Marine Science

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

Christina Trapani, Owner, Eco Maniac Company**,** Marine Debris Researcher & Consultant, Virginia Beach Clean Community Commission

2. Engaging Partners & Raising Awareness about the Virginia Marine Debris Reduction Plan and Preventing Marine Debris

The Virginia Marine Debris Reduction Plan 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 engage additional partners and inform the public about Virginia's marine debris reduction efforts as well as the balloon litter prevention social marketing campaign.

- Overviews of the Virginia Marine Debris Reduction Plan was presented to Virginia Coastal Zone Management Partners, MARCO staff and representatives, participants of an EPA Trash Free Waters meeting, EPA Region III Citizen Water Monitoring Conference, Hampton Roads Alliance for Environmental Education, and NOAA MDP workshop for DE, DC, MD & VA.
- Water quality professionals attending the 2015 Virginia Water Monitoring Council Conference (11-19-15) also learned about the Virginia Marine Debris Reduction Plan. This resulted in discussions with a stormwater management manager from Roanoke about water pollution caused by polystyrene building materials, and initiated discussions with state parks regarding balloon release and sky lantern policies (see below).
- Virginia CZM Program's marine debris exhibit was displayed at several public events.
- Project staff assisted VIMS with an 8-page newsletter about marine debris
- Project staff assisted MARCO on an assessment of marine debris in the mid-Atlantic.
- Project staff assisted advised MARCO on a proposal to NOAA MDP on a grant opportunity.
- Partners from VIMS, Clean Virginia Waterways, and others assisted several student groups working on trash-related issues as part of an international contest called "FIRST LEGO League." Virginian students did original research on balloon litter, cigarette litter, plastic bottles and plastic bags. The sources, impacts, and solutions to marine debris were shared with 1,300 students and their teachers during a "Meet the Experts" event in Alexandria, VA in Sep 2015.

One FIRST LEGO League Team "the Ruling Robot Falcons" conducted original research on creating balloons that would biodegrade as soon as they touched water. Scientists from VIMS assisted their research. The Ruling Robot Falcons were invited to present their research at the 2nd Virginia Marine Debris Summit.

Other FIRST LEGO League teams worked on plastic bottle (above left) and cigarette butt litter issues. More than 1,300 Lego League participating students plus their teachers learned about marine debris from NOAA, Ocean Conservancy and Clean Virginia Waterways staff (above right).

3. Policy Development Regarding Balloon and Sky Lantern Releases

While education and regulations can contribute to changing people's behavior, policies within institutions can also be effective. Here are examples.

University Policy Regarding Balloon and Sky Lantern Releases

Clean Virginia Waterways staff and interns compiled a list of policies at U.S. colleges that restrict balloon releases, and created a fact sheet that summarized research on the impacts of balloon litter as well as sample policy language. CVW staff and interns met with policy makers at Longwood University to request a policy that bans balloon and sky lantern releases on campus as well as at all university events. Longwood University is affiliated with Clean Virginia Waterways, and provides office space, interns and fiscal management to Clean Virginia Waterways. As a result, Longwood University added this policy to its Student Handbook:

> *"Longwood University prohibits any students and Registered Student Organizations (RSOs) from releasing sky lanterns or helium filled balloons, latex or foil, on any university owned or managed property, or at any university sponsored events. Helium filled balloons or sky lanterns must be securely fastened at both inside and outside events. Students and RSOs are responsible for the proper disposal of sky lanterns, balloons and all related supplies."*

This new policy could be a model for other institutions.

Virginia Green Program

CVW staff contacted the Virginia Green Travel Alliance and the Virginia Green Program about adding language to their guidelines that would discourage the mass release of balloons and sky lanterns at events and festivals, as well as conferences and other meetings. VA Green made these changes to their guidelines. The Virginia Department of Environmental Quality's website on "Environmentally Responsible Conferences, Meetings and Events" now reads:

> *"Do not plan a balloon release. Balloon debris often ends up in streams, rivers, and the ocean, even when released inland. Marine animals can ingest the balloons or become entangled by their attachments, causing great injury and even death."*

State Parks

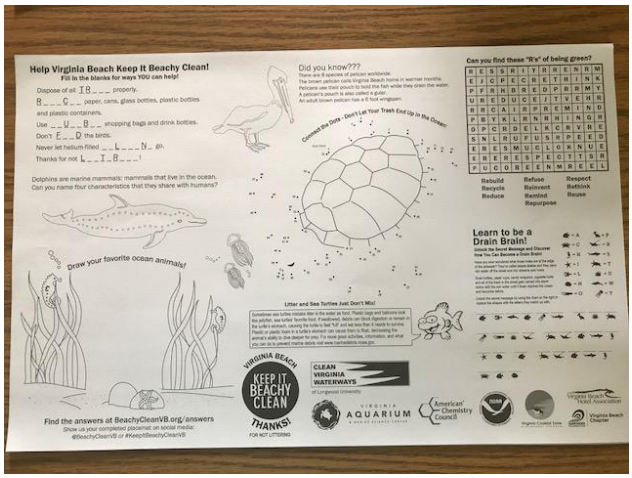
Irene C. Frentz, a resource specialist for 7 state parks located in the middle of Virginia (District 4) attended the VA Water Monitoring Council's annual conference where she learned about the on-going balloon litter research. She asked for more information about balloon policies. Katie Register provided Irene with handouts that were prepared by the Virginia Coastal Zone Management Program and Clean Virginia Waterways about the sources and impacts of balloon litter. Later, during a meeting with park rangers from the 7 parks, Irene shared the handouts and asked for feedback on balloon releases in their parks.

Results: Irene reported,

> *"During our district 4 meeting, the district manager as well as all park managers were willing to ban helium filled balloons from their parks! They will specifically mention balloons and sky lanterns as litter in any park-generated special use permits, flyers, brochures, etc. However, for any verbiage that is used in state wide publications, I need to work with my supervisor to see how we can get that done." The idea for this effort came from Irene. She knows the processes at the State Parks well, and how ideas for changes sometime are best coming from the parks themselves.*

4. "Keep It Beachy Clean" Campaign

Part of these grant funds supported the 2017 expansion of the "Keep it Beachy Clean" campaign. Clean Virginia Waterways' "Beachy Clean" and "Thanks for 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. 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 Beachy Clean's major partners are printed on the placemats, including NOAA and the Virginia Coastal Zone Management Program.

5. Restaurant Outreach Regarding Single-use Food and Beverage Items

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.

As part of the Virginia Coastal Zone Management grant for source reduction, Clean Virginia Waterways and contractor Christina Trapani conducted a preliminary research study on reducing single-use food and beverage-related items in restaurants. The goal was to get a snapshot view of the types of single use plastic items being used in restaurants, the sustainable alternatives being used, or at least tried, and learn of any challenges or obstacles that prohibit restaurants from using the sustainable alternatives.

We did some research into programs in place locally and around the country that are designed to reduce single-use plastic use in restaurants. In Virginia, Virginia Green is a self-certifying program that makes several recommendations to restaurants including minimizing "the use of disposable food service items" and required items should be recyclable or compostable. Other programs of note:

- Surfrider Foundation's Ocean-Friendly Restaurant Program, recommendations include no expanded polystyrene (EPA) foam products, no plastic bags, and straws only upon request.
- Clean Water Action's Rethink Disposables Program involved working with restaurants to come up with source reduction strategies and solution implementation. They were also able to show restaurants how much money they saved by implementing these solutions.
- The Last Plastic Straw challenges consumers to refuse straws at restaurants and challenges restaurants to only serve straws upon request, use paper or compostable straws, or completely eliminate straws.
- Restaurants in Charleston, SC are participating in a "Strawless Summer Challenge." More than 70 restaurants in Charleston have pledged to stop using plastic straws this summer.

We interviewed 11 restaurants, a food truck, a health food store and the captain of a dolphin-watching vessel (see Appendix A). Every restaurant interviewed uses some type of single-use item in house including straws, plastic cups, lids, soufflé cups (for sauces and dressings), individual creamers and individual servings of butter. The single-use items being used for take-out included clamshell boxes, plastic utensils, plastic or foam cups with lid and straw, plastic or paper bags, and cardboard pizza boxes.

All but one of the interviewees were using at least one sustainable (compostable) product in place of regular plastic. Biodegradable/compostable cups, paper straws, paper clamshells and compostable utensils/straws were the most commonly used biodegradable items used. The most common comment about these items was that the cost was significantly higher than foam or plastic.

High-quality paper straws were custom printed with two messages: A) the Virginia Coastal Zone Management Program logo with a message to "Prevent Marine Debris!" (above) and B) Keep it Beachy Clean with images of sea turtles and dolphins. Paper straws were distributed to participating restaurants in Virginia Beach, Richmond, and Farmville, Virginia.

12,000 paper straws were distributed to most of the participants. Only one restaurant had a complaint about the durability of the straw, but the rest of the participants had positive feedback with the exception that the cost of switching from plastic to paper straws would be significant. They would be interested in using paper straws if the cost came down.

Other noteworthy findings:

- The power of on-line reviews and comments by customers:
  - One restaurant mentioned that they had had an online customer review (Yelp) stating that they should be using papers straws so the restaurant ordered some paper straws to try out. This suggests that on-line reviews carry weight with restaurant managers and owners.
  - Two restaurants commented that customers expect to get a straw and to not have to ask for one. One concern is a bad online review because the customer had to ask for a straw.
  - A woman was spotted by our contractor, Christina Trapani, with a paper straw in her purse. She had just been at one of the participating restaurants and thought the paper straws were the coolest thing, so she saved hers!
- Many restaurants use the plastic soufflé cups for condiments because the metal or ceramic ones often end up getting thrown away by accident.
- Several restaurants are using compostable PLA (polylactic acid) cups, containers, straws, etc., but only one restaurant is sending their waste to a commercial composting facility. The closest composting facility to Virginia Beach is two-hours away and there is only one hauler in the area. This suggests the need to increase the number of composting facilities near population centers.
- One restaurant noted that not only are plastic bags less expensive, but they take up much less space in their restaurant than paper. This is an important consideration when space is limited.

- One restaurant, a coffee shop, was producing zero waste until they started to serve food. They were very disappointed in the amount of plastic packaging being used by their suppliers, "everything is shrink-wrapped."

6. Video for Recreational Boaters Regarding Preventing Marine Debris

Part of this grant supported research on the development of a short video that would be targeted to recreational boaters about ways they can prevent marine debris. The goal of this research was to:

- Determine if such a video was needed (or does it already exist),
- Gain input from partners on the need for such a video, and their support
- Determine the video's messages.

The hope is that this research will assist in the production of a video in the future as funding becomes available.

Clean Virginia Waterways and contractor Kathy O'Hara created a list of videos and other resources that are currently available on this topic. In addition, Kathy O'Hara investigated the current Virginia Boating Safety Education Course requirements; the agencies and organizations involved; the structure and content of existing courses; and the extent to which the topic of marine debris is covered. Findings are as follows:

Virginia Boating Safety Education Course Requirements:

- By Virginia state law, all operators age 14 and older of boats 10-horse power or greater are required to complete a boating safety course in Virginia (under age 14 are not permitted to operate a boat without a certified operator). There are a few exemptions to this rule but one that is most relevant to the issue of marine debris is that registered commercial fishermen are not required to take this course.

- All boat operators stated above were required to take this course (or a challenge equivalency exam) beginning in 2016. Therefore, it can be assumed that those now taking the course are mostly new boaters, new Virginia residents, or recently turned 14 years of age. However, there is no minimum age to take class so that it is available to boaters under the age of 14.

- Virginia boating safety courses are offered in classrooms and online by several agencies and organizations. Several of these groups have unique versions of the course but all must be accepted and approved by the National Association of Safe Boating Law Administrators (NASBLA) and the Virginia Department of Game and Inland Fisheries (VDGIF).

Agencies and Organizations Offering Approved Virginia Boater Education Courses

- Classroom Boat Safety Courses (and associated costs):
  - VDGIF Boat Virginia Course--free of charge to the public
  - US Coast Guard Auxiliary--may include some cost to cover materials ($25–40)
  - U.S. Power Squadrons—may include some cost to cover materials ($25–50)

- Online Boat Safety Courses Provided by Commercial Vendors
  - Boat US Foundation (Free Course) by Boat US Foundation

- Virginia Boating Safety Course (Fee-Based Course)
- Boat Virginia Boating Safety Course (Fee-Based Course)
- Virginia Boat Operator's Course (Fee-Based Course) American Boating Education
- Aceboater Boating Safety Course (Fee-Based Course) by Aceboater.com

Structure and Content of Existing Virginia Boating Safety Courses

In order to understand the structure and content of the boating safety courses currently offered by the agencies and organizations listed above, several courses were investigated and/or completed. Both available free courses were assessed with the idea that most boaters would choose free options over those with a fee. An additional course was reviewed that requires a fee upon completion in order to obtain a boating safety certificate. The courses that were reviewed are as follows:

- VDGIF Boat Virginia Course (classroom, free)
- Boat US Foundation, Virginia Boating Safety Course (online, free)
- Boat Virginia Boating Safety Course (online, free to take course but must pay to get certification card)

A summary of the course content and information provided in the VDGIF and Boat US Foundation classes is included in Attachment 1. Major findings relevant to this project include:

- All materials included in Virginia boating safety classes must be accepted and approved by NASBLA and VDGIF.
- A great deal of information is presented in boating safety classes in Virginia.
- There is very little information included in the VDGIF classroom course on marine debris.
- The online Boat US Foundation safety course includes information on marine debris but not a video. Videos are included on environmentally safe methods of fueling and sewage pumpout.

Recommendations

1) Based on this research and the fact that boaters receive a significant amount of information in boating safety classes, it is recommended that a video on marine debris for recreational boaters be short (2-3 minutes) and interesting. The goal should be to create a high quality and entertaining video that instructors will choose to include in current boat safety classes. In addition, it should be noted that most boaters taking this class are new and may have very little experience on an actual boat. Therefore, demonstrations will be an important part of explaining marine debris prevention.
2) The video should be created as a stand-alone video that could be shared via social media and imbedded on partners' web sites.
3) The video should not be Virginia-specific, but instead be designed to serve multiple states.

Information on existing videos and other educational materials relevant to the issue of recreational boaters and marine debris prevention can be found in Appendix B.

Support for the video concept

Letters of support for this project have been secured from BoatUS Foundation via Ms. Alanna Keating, Outreach Manager, and the Virginia Aquarium and Marine Science Center via Mark Swingle, Director of Research and Conservation. Stacey Brown, Boating Safety Project Manager with the Virginia Department of Game and Inland Fisheries also was very supportive, said she would try to help with eventual

dissemination. Attempts were also made to secure a letter of support from the Virginia Marine Resources Commission.

In addition, ideas and suggestions for video content and dissemination have been solicited from a local boating safety instructor, Master Police Officer, George Yates with the Virginia Beach Marine Patrol. According to Officer Yates, he would be receptive to using a video to augment his classes and feels boaters would be receptive as well. He has offered to allow us use his future classes to acquire input from boaters and pilot any materials.

The top messages that should be included in a short video.
After consulting with many partners, the following list of priority messages was determined:

1. Never throw trash (including cigarettes butts) in the water.
2. Minimize excess packaging taken onboard.
3. Establish a bucket or other container for trash generated onboard and recycle wherever possible.
4. Avoid running over buoys and other types of commercial fishing gear.
5. Retrieve floating debris even if it's not yours (good way to practice man overboard drill).
6. Display required garbage disposal placards on vessels 26 feet in length and greater.

4. Draft a script of a video
As stated, Virginia boating safety courses contain a tremendous amount of information to teach and learn. Therefore, for a 2-3 minute video to be voluntarily included in these classes, it would need to be desirable to agencies and instructors and memorable to students. Therefore, in order to keep the video brief and to the point, the following major elements were determined to be important to include in the script:

- Explanation of the extent of the marine debris problem worldwide and specific to Virginia which will include pictures of plastic trash floating and on beaches accompanied by narration.
- Explanation of specific impacts of debris including wildlife ingestion, entanglement, fouled props and ghost fishing with more pictures and/or video.
- Statement about law.
- Demonstration of what boaters can do to prevent marine debris with video demonstration of each.

Appendix C offers two versions of a proposed script for recreational boaters on marine debris prevention. The first, the 'Celebrity Script,' was created to feature a celebrity spokesperson, one who would be considered popular among a select group of recreational boaters. The second script, 'Narrated Script,' includes narration with videos and photographs showing problems and impacts of marine debris. Both videos include demonstrations of actions recreational boaters can take for marine debris prevention.

It should be noted that photographs are included at the end of both scripts. These are provided as representations of the types of photographs that could be used. However, approval would need to be secured for all photographs and alternative photographs could also be identified.

7. Potential Future Fee and Tax Structures in Virginia Related to Litter and Recycling

As the Virginia Marine Debris Reduction Plan was developed, it became clear that most efforts to research, prevent or mitigate marine debris would require funding. For example, the stakeholders who contributed to writing the plan agreed that increasing education, outreach, research and improving stormwater management would all be effect strategies, but expensive.

Localities in Virginia currently have one sustained source of funding for litter-prevention and recycling: the litter prevention and recycling grants provided by the Virginia Department of Environmental Quality through a non-completitive grant program. According to DEQ:

> *"These grants have been awarded annually, since 1980, to localities for local litter prevention and recycling program implementation, continuation, and/or expansion. In 2017, $1,812,330 was disbursed among 190 applicants (representing 309 local government programs). Since 1981, Virginia businesses, who pay into a trust fund, have contributed over $59M to the fund to support local government litter control and recycling programs."*[1]

These grants are funded by the Virginia Litter Tax. This annual litter tax (currently $10 per year) is charged to manufacturers, wholesalers, distributors and retailers of food for human or pet consumption, cigarettes, soft drinks, carbonated waters, beer, wine, newspapers, glass and metal containers, and related groceries. An additional tax of $15 is paid by the manufacturers, wholesalers, distributors and retailers of the following specific products: groceries; soft drinks and carbonated waters; and beer and other malt beverages.

This tax generates a bit less than $2 million annually which is distributed to local recycling and litter prevention programs (that apply) based on a calculation of population and road miles. In Fiscal Year 2016 (July 1, 2015 through June 30, 2016), the litter taxes generated $1,907,712, and in Fiscal Year *2017,* the amount was $1,812,330.

This tax has not increased since it was first passed in 1976. If this tax had kept up with inflation, the taxes would currently be $44 and $66.[2] If the tax were raised to $44 and $66 to keep up with the Consumer Price Index, the annual tax revenue would be nearly $8 million (see Figure X).

Type of tax	**Amount of the VA Litter Tax**	**FY 2016 tax revenue**	**If these taxes had been indexed to rise with inflation, they would be:**	**Potential tax revenue**
Litter Tax	$10 annually	$ 906,404	$44 annually	$3,988,160
Soft Drink Tax	$15 annually	$ 219,459	$66 annually	$965,580
Beer Tax	$15 annually	$ 781,850	$66 annually	$3,440,118
Totals:	**---**	**$1,907,712**	**---**	**$8,393,858**

Virginia's Litter Tax. Since the Virginia Litter Tax was started in 1976, it has remained at $10 and $15 annually. If it had been indexed to rise with inflation, the tax would generate more than $8 million annually to combat litter and increase recycling in Virginia.

Other states have used market-based instruments to raise revenue for litter-prevention and to

[1] VA DEQ. May 2017. "Recycling Grant Program Annual Performance and Accounting Summary Report, Fiscal Year 2016."

[2] These numbers were obtained by using the Inflation Calculator *https://data.bls.gov/cgi-bin/cpicalc.pl*

encourage changes in behavior. Market-based instruments include taxes, charges, fees, fines, penalties, subsidies and incentives. Some states and local governments employ targeted litter taxes to raise funds that are applied to litter cleanups. For example, in San Francisco, CA, litter taxes on the sale of cigarettes generated $2.86 million in the fiscal year July 2015 through June 2016, and $3.41 million in the 2016-17 period.[3] The revenue is spent on cleaning streets, sidewalks and public property. San Francisco considers its "cigarette litter abatement fee" a fee-for-service. San Francisco, which determined that more than 50% of its litter comprised of cigarette-related items, also considered a litter fee on fast food to help cover litter abatement costs.

In 2009, Washington D.C. passed the Anacostia River Clean Up and Protection Act – also known as the "Bag Law" – that requires that District food and alcohol businesses to charge a $0.05 fee for each paper and plastic bag distributed with purchases. Revenues from the fee have been used to implement a trash capture, watershed education, and stream restoration projects throughout the Anacostia Watershed. Low-income and aging populations throughout the District also received reusable shopping bags paid for by the bag fee revenue. In seven years (2010-2016), the bag fee revenue was approximately $13.8 million.[4]

Members of the Virginia Marine Debris Reduction Advisory Committee, while supportive of increased funding for marine debris prevention and research, indicated that increasing the Virginia Litter Tax, enacting "litter abatement fees," or bag fees were not feasible at this time. To illustrate this point, in January 2017, the Virginia Senate Finance Committee killed a bill (SB 925) that proposed a 5-cent tax on disposable bags. The proposed tax on plastic bags would have generated between $14 million and $18 million annually for the Chesapeake Bay Watershed Implementation Plan[5]. According to Virginia's Legislative Information System, almost every year other attempts to tax plastic bags in Virginia have died in committee in the General Assembly.

Several times a year, Clean Virginia Waterways is contacted by school students, environmental organizations, concerned citizens, and elected officials all interested in having their local governments implement local ordinances that address single-use bags. Some call wanting to restrict or place a fee on other single-use items that frequently end up as litter and marine debris. CVW explains to them that under the Dillon Rule, municipalities have only the powers expressly granted to them. So far, attempts to ask for permission from the Virginia General Assembly for local bag bills have not been successful.

8. Marine Debris Items of Special Concern: Other Activities

Members of the Virginia Marine Debris Advisory Committee have been busy with their own marine debris prevention and removal work. Here are a few examples:

Katie Register (CVW) attended a NOAA Marine Debris Program meeting in Maryland during which the role of the "citizen scientist" was discussed and availability of citizen science tools was reviewed.
She has also served as resource for local governments, NGOs and others who are looking for information on how to implement local bans or fees on plastic bags.

[3] San Francisco Examiner. September 24, 2017. "SF's cigarette "litter" fee on packs sold increases to 60 cents." *http://www.sfexaminer.com/sfs-cigarette-litter-fee-packs-sold-increases-60-cents/*

[4] Government of the District of Columbia, Department of Energy and Environment. May 11, 2017. Anacostia River Clean Up and Protection Fund, Fiscal Year 2016 Summary Report.

[5] Virginia Department of Taxation

Microplastics: Two of our team participated in a Chesapeake Bay microplastic sampling in Maryland waters.

Balloons: Five years of data (2010—2014) from the International Coastal Cleanup in Virginia were analyzed in order to better understand the accumulation of balloon litter in coastal environments versus inland sites. Of the 4,916 balloons reported by volunteers 2010-2014, more than 63% were found on ocean beaches.

Shotgun wads: In a collaborative effort, shotgun wads found during beach monitoring were collected and sent to the VA Institute of Marine Science for its ongoing research into this form of marine debris.

Clam netting: Partners met with Richard Ayers, author of two CZM research projects (2004 & 2006) to discuss current issues, trends, stakeholders, and possible future actions to address this form of derelict fishing gear. CVW requested data from VIMS regarding clam aquaculture on the east coast in order to determine if derelict clam netting is just a Virginia problem, or if it is a multi-state mid-Atlantic issue. Data suggests that it is mainly a Virginia issue. Preliminary discussions took place about the possibility of creating a net removal program, or work with the aquaculture industry to prevent netting from becoming derelict. Further work on this issue will be done as part of other grants.

Cigarette butts: Two groups in Virginia won Cigarette Litter Prevention Grants from Keep America Beautiful to do innovative regional efforts to reduce this form of litter in Virginia Beach and the Hampton Roads region, involving dozens of local partners.

B. Design and Implementation of a Social Marketing Campaign Titled "*A Rising Concern: Reducing Balloon Release and Debris*

Overview

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 CZM grant – FY14 Task 95.03 – supports that NOAA grant. An important secondary goal of the NOAA Marine Debris Grant was to build capacity among partners in developing and implementing future social marketing campaigns could target common, persistent, and harmful marine debris items such as single use plastic bags, derelict fishing gear, crab pots, microplastics, and cigarette butts.

One of the near term actions identified in the Virginia Marine Debris Reduction Plan was design and implementation of a social marketing campaign targeting behaviors that will reduce balloon litter in the marine environment. (Balloons were identified as one of the most harmful items to wildlife.) The first step was to conduct research to better understand who plans balloon release events – and, most importantly, why. Funding through this grant enabled 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 research, including a public survey, interviews and focus groups, began in October 2014. An initial analysis of our research findings indicated that additional focus groups were needed to validate our findings, and these were conducted through January 2016. This research supported the idea of first implementing a campaign pilot focused on addressing balloon releases at "celebratory" events, and staff elected to focus on weddings for the first pilot strategy. Before designing a campaign strategy, staff spoke with and listened to brides about what a wedding send-off ceremony means to them, and then conducted message testing from November 2016 – February 2017 to refine a strategy that would be effective at reaching and changing the behavior of couples, as well as educating planners and others who influence the decisions of couples. The campaign – Joyful Send-off – encourages 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 will not organize or participate in a balloon release in the years to come.

Joyful Send-off

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

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 the other mid-Atlantic states.

Pre-Campaign Qualitative and Quantitative Research Goals and Process

This grant enabled the hire of a professional research firm with expertise in social marketing to guide and assist the project partners in conducting the pre-campaign qualitative and quantitative research. The research firm, OpinionWorks, developed all research protocols and materials, including moderator scripts used for facilitating focus groups as well as scripting to conduct in-depth interviews with representatives from organizations unable to participate in the focus groups. OpinionWorks also recruited and grouped focus group participants representing various interests that have engaged in or currently engage in distribution and release of balloons. The firm worked with project staff to take observation notes and complete an analysis of the focus group data to identify themes in behavior between the focus group and interview participants. Through these focus groups and interviews we were able to begin to determine what these distributors believe their "clients" are looking for when they acquire and release balloons (how do they market the balloons?). Project partners made it clear to balloon industry representatives that we do not want to eliminate balloons but reduce release of balloons, and that we want to work with them. The focus groups were held in three locations including the Roanoke area and in two of Virginia's most densely populated coastal areas: central Virginia (Richmond), and Hampton Roads. See Appendix D for a summary of balloon research tools and findings.

Based on the qualitative assessment findings, a quantitative assessment – again with support from OpinionWorks – was conducted via a public survey to measure knowledge, attitudes and practices of end-users of helium balloons prior to campaign development. The survey helped test the validity of hunches about which behavior change messages would appeal most to a larger and more diverse range of audiences, and also which mass media or communication tools might be most effective in reaching this wider audience with our messages and altering their behavior. This brief written survey was distributed through the Internet and in hard copy at public and partner-sponsored events, and provided a random and ample sampling of the public not only in coastal Virginia, but in Washington, DC and coastal Maryland.

Developing effective social marketing strategies means avoiding making premature assumptions that we know who should be our primary audiences, the attitudes, awareness and knowledge of these audiences and what messaging and strategy will work to change the behavior of these audiences. This qualitative and quantitative research carefully explored the barriers and benefits to our selected behavior — the accidental and purposeful release of balloons—and enabled staff and partners to develop not only the first pilot campaign strategy focused on weddings but have laid a foundation for development and implementation of additional focused campaign strategies that will reduce balloon release by other targeted audiences during other "celebratory" and "memorial" events. Through the formative research conducted—interviews, focus groups and surveys—project staff increased their knowledge and understanding of the underlying drivers of the celebratory or bereavement behavior and the barriers to a different way of expressing these emotions. Project staff can now focus on designing social marketing strategies to "sell" alternatives to balloon releases. Through the current pilot strategy focused on wedding related releases, and future campaign strategies, we will also engage and educate non-traditional audiences that may include party/event planners, funeral directors, car dealership

employees, sports team managers, school administrators, and others who make decisions that lead to marine debris.

Overview of Qualitative and Quantitative Research Methods and Findings

Using the following quantitative and qualitative research methods, project staff – working with the research firm, OpinionWorks – identified the following key themes regarding balloon release. More specific details and summaries of these methods and findings are provided in the Appendices.

The research included:

- A literature review (about the impacts of balloon litter on wildlife and examples of effective social marketing campaigns on environmental behavior issues)
- Mass and social media analysis (especially wedding blogs – see Appendices D-a and D-b
- Interviews with retailers
- Public survey (with more than 800 responses – see Appendix D-c
- Initial research on power outages caused by balloons in Virginia and other states
- Initial research on balloon release policies at venues (e.g., parks, churches, schools)
- Initial research on the number of electrical outages caused by balloons contacting power lines
- Focus groups (five held with the general public in Richmond, Virginia Beach and Roanoke and another virtually with school principals from other areas of the state.

An analysis of these findings has identified some key themes:

- A lack of knowledge – Many people do not understand that NO balloon is "environmentally friendly," and that EVERY released balloon becomes litter and can be harmful. Those who ARE aware, justify or rationalize their actions.
- People assume "biodegradable" means "harmless"
- Who plans these events? Mostly associations, families and schools. Women plan about 85% of releases.
- Where are balloons released? Mainly in parks, outside of schools, churches and wedding venues. Some rural residents think their distance from the ocean makes balloon releases acceptable.
- When are balloons released? Spring has the highest number of balloon releases, followed by the fall.
- Why are balloons released? The majority of balloon releases are at "sad" events (funerals, memorials). Other releases are organized to raise awareness, or are at "happy events" (e.g., weddings, graduations). The sight of balloons rising into the sky provokes strong emotions.
- There was a very strong response from focus group participants in Richmond to the idea that balloons caught on power lines can cause power outages. Their reaction indicates that this message – balloons can cause power outages – should be part of our campaign.

Although the partners were able to conduct on-campus interviews at George Mason U, barriers to effectively reaching students at other schools led the partners to re-assess an earlier to plan to develop and pilot two social marketing strategies.

The specific role of OpinionWorks included working with project staff to: create a script to interview retailers; design and distribute the written survey; prepare (scripting, recruitment and logistics) and facilitate two focus groups in Richmond in June 2015 – in person with the public and virtually with

school administrators *from around the state*; and, to create a PP for July 2015 and June 2016 webinars for campaign planning team partners highlighting research findings to date and next steps https://drive.google.com/open?id=0B95MAcp2XlsmWUhYY3ZoX29xOFk). See http://www.deq.virginia.gov/Portals/0/DEQ/CoastalZoneManagement/Reports/MarineDebris-RegisterRaabe-CPW16.pdf?ver=2016-12-16-101950-943 for the most recent overview of research results. OpinionWorks also recruited participants for three general public focus groups facilitated by project staff – two on December 15, 2015 in Virginia Beach and one in Roanoke on January 20, 2016. Finally, OpinionWorks participated in a review of all data, and guided identification of the target audience(s) and development of messaging.

Project staff also engaged additional partners and informed the public about Virginia's marine debris reduction efforts and the balloon pre-campaign research, including presentations at the 2015 Hampton Roads Alliance for Environmental Education Conference, 2015 Virginia Water Monitoring Council Conference, NOAA Marine Debris Program regional Webex in December 2015, EPA Region III Citizen Monitoring Summit, Virginia Marine Debris Summit in March 2016, Virginia CZM Partners Workshop in November 2016 and at the VA Water Monitoring Council Conference in March 2017.

Campaign Strategy

With the qualitative and quantitative research findings in hand, project staff developed a CBSM strategy to pilot in the Hampton Roads region targeted at encouraging alternatives to balloon releases at weddings, and tested for its effectiveness at significantly reducing balloon releases before being more broadly implemented in Virginia. This campaign will be officially launched on August 9, 2017. An outline of the campaign strategy is provided in Appendix E.

Final development and implementation of the strategy is underway through a NOAA MDP FY14 grant and FY15 and FY16 grants from the Virginia CZM Program. A final report outlining and evaluating the strategy will be submitted at the completion of the NOAA MDP grant which ends on September 30, 2017. This report will not be completed and submitted as a deliverable under this grant.

Production of Campaign Strategy Multi-Media Materials

To provide the vivid, compelling imagery needed to convey the campaign message via these online and printed communication tools, project staff contracted with Dragon Studios, a professional photographer. Through funding from this grant, the photographer worked with a team including a videographer and wedding marketing consultant to conduct seven (7) photo shoots between November 2016 – June 2017 to produce numerous still images and a series of eight (8) videos. The videos include:

- 40-60 second snippets that highlight wedding send-off alternatives to balloons
- 9-minute video with interviewed couples sharing the celebratory choices they made and why they did not release balloons
- 9-minute video of interviews with wedding venues and vendors describing what they allow and encourage
- 15-minute video of interviews with environmental professionals and volunteers about the impacts of balloon debris and why they should not be released

Mike Dragon of Dragon Studios at a Joyful Send-off photo shoot.

These videos are downloadable from www.JoyfulSendoff.org and have been shared via social media. The imagery produced has been be instrumental in generating additional multi-media materials for the wedding campaign strategy (funded through a FY14 NOAA MDP grant and FY15 and FY16 CZM grants), including magazine ads, giveaways and prompts distributed through partnerships with venues and vendors and targeted at couples during wedding planning. Still and video imagery was also captured for future strategies discouraging balloon releases at other celebratory events - such as birthday parties - and memorial events.

On-line media —a means through which to communicate and spread the campaign's message most widely and affordably—and print media are important components of the Joyful Sendoff campaign strategy. Social media sites – Facebook, Twitter, Instagram, YouTube – have been established, and drive visitors to the campaign website – www.JoyfulSendoff.org – for alternative send-off ideas. The campaign was officially launched on August 9, 2017, and work is still progressing on populating the website. Printed campaign materials will be downloadable from this site as they are rolled out. A brief pop-up survey on the site will help collect feedback on the campaign, and a tracking tool will help measure site visits. The campaign will also provide feedback to the community on the results of their efforts to help reduce balloon debris.

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: http://deq.state.va.us/Programs/CoastalZoneManagement/CZMIssuesInitiatives/MarineDebris/MarineDebris-Balloons.aspx. 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.

C. Monitoring Balloon Debris

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. The pre-campaign surveys provided some baseline data of the types, quantities, occasions of release (Mother's day, Valentines day, graduations, etc.) and sources (where possible) of balloon debris.

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.

Two independent researchers with extensive experience in marine debris issues (Christina Trapani and Kathy O'Hara) were sub-contracted by CVW to conduct accumulation surveys of balloon litter at five sites during this grant period. Sites were: Smith Island, Hog Island, Fisherman Island, Cedar Island, and False Cape State Park. 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. Photos and gps coordinates were taken of each balloon or balloon group *in situ*.

Other 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.)

A total of 18 monitoring events were supported by this grant:
Smith Island, 3
Hog Island, 3
Fisherman Island, 5
Cedar Island, 4
False Cape State Park, 3

During monitoring supported by this grant, more than 1730 balloon litter items were recorded.

Balloon litter was in the “top three” most commonly found items during most of the surveys in which “other litter” was recorded. Weather balloons were also found during many of the surveys. One sky lantern was recorded during a survey at False Cape State Park.

Partners providing transportation and access: Partners providing transportation and access: VA Dept of Game & Inland Fisheries, The Nature Conservancy, US Fish & Wildlife Service, VA Aquarium, and the VA Dept of Conservation and Recreation (state park).

A new in-the-field data form was developed to facilitate standardized data collection (see Appendix F).

Shotgun wads found during these surveys were collected and sent to the VA Institute of Marine Science for its ongoing research into this form of marine debris.

A full report on this research will be available in December 2017.

APPENDICES

A. Restaurant outreach: Interview script for restaurants, food trucks, health food store and dolphin-watching vessels and Links to programs addressing single-use articles in food service industry …… Page 26

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a. Balloon CBSM Research Tool: Summary Details of Mass and Social Media Analysis ……. Page 61

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E. Outline of Joyful Send-off Campaign Strategy ……. Page 85

F. Balloon litter monitoring in-the-field data form …….. Page 89

Appendix A

Restaurant outreach: Interview script for restaurants, food trucks, health food store and dolphin-watching vessels

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Restaurant Name_____ Location_____

Contact Name _____ Phone _____

Email _____ Virginia Green Certified? YES or NO

How many customers to you estimate you serve per week? _____Summer _____Off Season

What types of single use items do you use for sit-down meals in your restaurant? For example, plastic utensils, plastic soufflé cups, plastic single-serve creamers, foam kids cups, plastic straws, etc.

_____

_____

Which of these do you think would be easiest to replace with a reusable item, i.e. replace creamers

_____

What types of single use items do you use for take-out / left-overs?

_____

_____

Have you tried or do you currently use any sustainable alternatives to single use plastic/foam items?

_____

_____

Did you or are you experiencing any challenges to using these items?

_____

_____

Are there any items you would like to try? Why haven't you? Talk about barriers to using sustainable items.

_____

_____

Other comments:

_____

Would you be willing to give paper straws a try? We would ask that you provide us with some feedback after you've used them. _____

Date of interview _____ Recommended follow-up date _____

Appendix A (con't)
Links to programs addressing single-use articles in food service industry

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Surfrider Foundation Ocean Friendly Restaurant Program:
http://www.surfrider.org/pages/ofr
http://www.oceanfriendlyrestaurantshawaii.org/
http://hsbsurfrider.org/oceanfriendlyrestaurants
http://asburyparksun.com/schlossbach-garners-ocean-friendly-restaurant-title/
https://jerseyshore.surfrider.org/2016/11/22/ocean-friendly-restaurants/#more-4288
http://www.plasticoceanproject.org/ocean-friendly-establishments.html

Virginia Green Program
http://www.vrlta.org/mpage/vgsnHome
http://www.deq.virginia.gov/Programs/PollutionPrevention/VirginiaGreen/GreenRestaurants.aspx

Clean Water Action, Rethink Disposable Program
http://www.cleanwateraction.org/campaign/rethink-disposable
http://www.cleanwater.org/features/reducing-disposables-food-service
http://www.cleanwateraction.org/rethinkdisposablenj
http://www.cleanwater.org/features/rethink-disposable-program-materials-and-publications
ReThink Disposable: a program to reduce use of marine debris-prone items from food service industry: https://www.youtube.com/watch?v=JV6DPLCympw&feature=youtu.be
Reusable Foodware Service Guide
http://www.cleanwater.org/files/publications/Reusable%20Foodware%20Service%20Guide.pdf

Plastic straw reduction efforts
Plastic Pollution Coalition: http://www.plasticpollutioncoalition.org/no-straw-please/
The Last Plastic Straw: http://thelastplasticstraw.org/
Lonely Whale Foundation: Strawless Ocean Campaign: https://www.lonelywhale.org/strawless-ocean/
Strawless Summer challenges Charleston bars and restaurants to give up plastic straws
"Stop Sucking, Charleston"
https://www.charlestoncitypaper.com/charleston/strawless-summer-challenges-bars-and-restaurants-to-give-up-plastic-straws/Content?oid=9025592

Single-use plastic alternatives:
Aardvark Straws: paper straws and stirrers https://www.aardvarkstraws.com/

Sustainable Restaurant Association: http://www.thesra.org/

Virginia Laws of Interest:
"Single-service articles" means cups, containers, lids, closures, plates, knives, forks, spoons, stirrers, paddles, straws, napkins, wrapping materials, wooden chopsticks, toothpicks and similar articles intended for one-time, one-person use and then discarded.
2VAC5-585-1740. Single-Service and Single-Use Articles, Required Use.

A food establishment without facilities specified under articles 6 (2VAC5-585-1770 et seq.) and 7 (2VAC5-585-1885 et seq.) of this part for cleaning and sanitizing kitchenware and tableware shall provide only single-use kitchenware, single-use articles, and single-use articles for use by food employees and single-use articles for use by consumers

2VAC5-585-590. Using Clean Tableware for Second Portions and Refills.

A. Except for refilling a consumer's drinking cup or container without contact between the pouring utensil and the lip contact area of the drinking cup or container, food employees may not use tableware, including , single-use articles, soiled by the consumer to provide second portions or refills.

B. Except as specified in subsection C of this section, self-service consumers may not be allowed to use soiled tableware, including , single-use articles, to obtain additional food from the display and serving equipment.

C. Drinking cups and containers may be reused by self-service consumers if refilling is a contamination-free process as specified under subdivisions 1, 2, and 4 of 2VAC5-585-1230.

Appendix B
Information on existing videos and other educational materials relevant to the issue of recreational boaters and marine debris prevention

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1. https://www.boatus.org/clean-course/

   Format: This is an online video course entitled "Clean Boating Course".
   Stated aim: "As boaters, we have a close connection to the health of our waterways. Clean water is an essential part of boating. This free course will show you the simple steps you can take to reduce the impact boating activities on our waterways."
   Content: Course contains info on waste disposal, sewage disposal and a discussion of the "boating ecosystem", and the impact of plastic pollution on wildlife.
   Length: 1-2 hours

2. https://monkeysee.com/waste-disposal-for-green-boating/

   Format: Narrated online video produced by the BoatUS Foundation
   Stated aim: "BoatUS Foundation President Chris Edmonston discusses the proper waste and sewage disposal techniques for green boating."
   Content: Short video describing steps recreational boaters should take to minimize trash production and its introduction into the marine ecosystem.
   Length: 1:21 minutes

3. https://www.youtube.com/watch?v=XJ6OVxwysmo

   Format: Narrated online video produced by Joshua Dick
   Stated aim: "Discarded fishing line often presents a danger to marine life. Fortunately, there are easy and responsible ways to dispose of and recycle fishing line correctly."
   Content: Short video describing how discarded fishing line impacts marine life, followed by a discussion of how to dispose of/recycle the line.
   Length: 1:19 minutes

4. https://www.youtube.com/watch?v=65wk81UBQjU

   Format: Narrated online video produced by AP News
   Stated aim: "Over 12,000 crab pots are lost in Washington state's Puget Sound every year, costing an estimated $7"
   Content: Short video describing the environmental/financial impact of derelict crab pots in Puget Sound. Mentions boaters as one cause of this problem.
   Length: 1:20 minutes

5. https://marinedebris.noaa.gov/sites/default/files/Derelict%20crabtraps%20in%20SC-Problem%20Characterization%20and%20Prevention%20%28NFWF%20Poster%29.pdf

   Format: Poster presentation

Stated Aim: Survey licensed SC crabbers to characterize temporal-spatial patterns in derelict trap generation and related attributes. Collect detailed trap deployment and retrieval data for one crabber (traps fished with two float lines) to quantify vessel strike frequency as well as complete loss of traps. Engineer and evaluate the efficacy of modified surface float and line configurations to withstand repeated vessel strikes.
Content: While not in video form, this poster provides significant data on vessel strike frequency and subsequent trap loss that could be incorporated into the script of a video.
Length: N/A

6. https://www.youtube.com/watch?v=ezSMrVhWnZo

   Format: PSA video
   Stated Aim: "A short video about how marine debris can affect the lives of millions."
   Content: Shows the impact of one piece of trash on the larger environment – using Southern California as an example. I included this for you as an example of one type of tone to take in a PSA video, and the use of imagery vs. script in message conveyance.

   Length: 3:36

7. http://www.oceanconservancy.org/do-your-part/green-boating/2014-good-mate-brochure.pdf

   Format: Manual
   Stated Aim: "This training manual is designed to give recreational boaters and marina operators valuable information necessary for understanding environmental rules and regulations, techniques related to preventing marine pollution, and how to respond to pollution violations."
   Content: Chapter on Solid Waste and Debris including information on sources; human health, safety, environmental, and economic impacts; legal requirements and best management practices for boaters and marinas.

   Length: 51 pages

Observations and thoughts derived from non-video sources during this research:

1. Lots of focus online on marine debris in an ocean setting/commercial fishing. There is much less on lakes and bays debris in relation to recreational boating.
2. Marine debris information online tends to be specific to the area served by the boaters in question. Ex: Crab pot, lobster pots, pound nets are regional problems. This limits the amount of currently available information. Pound nets and derelict crab pots a big problem for boaters near Tangier Island in Chesapeake Bay.
3. Monofilament fishing line debris is a considerable problem and should be included in a VA regional video. Discussion of proper techniques for limiting fishing line debris should be included.
4. Boaters in general are conservative and are concerned about limits on their freedoms regarding recreational boating. Video perhaps should not focus only on "Don't", "Never", but on the positives and value clean water provides to boaters. Also, operationalize positive steps boaters can do to problem mitigation rather than avoidance of punishment.

Summary of Select Virginia Boating Safety Classes

VDGIF Boat Virginia Course

General Format: This free class was offered by a local boat dealer, Lynnhaven Marine. It was taught in their showroom over the course of two-nights, three hours each night. There is a significant amount of information in this course with a 100-question final exam given at the end. The instructors were both certified boat safety course instructors. The course was presented through a series of short videos that corresponded to the chapters in the VDGIF Boat Virginia booklet. Each video was narrated by the same young woman with subtitles. It was noted that there was only one segment in one of the videos that seemed to be added outside the framework of the overall program. This additional segment was approximately one minute long of an interview of a mother whose daughter was killed by a drunk boater. The video had subtitles and appropriate background music.

Information on Marine Debris: There was no information provided on the topic of marine debris in the course video entitled Environment. The subjects of waste, oil and trash were mentioned in one sentence.

Other: The course was attended by 11 people, 7 men and 4 women. The majority of participants appeared to be in the range of 22-40 years old although exact ages were not determined.

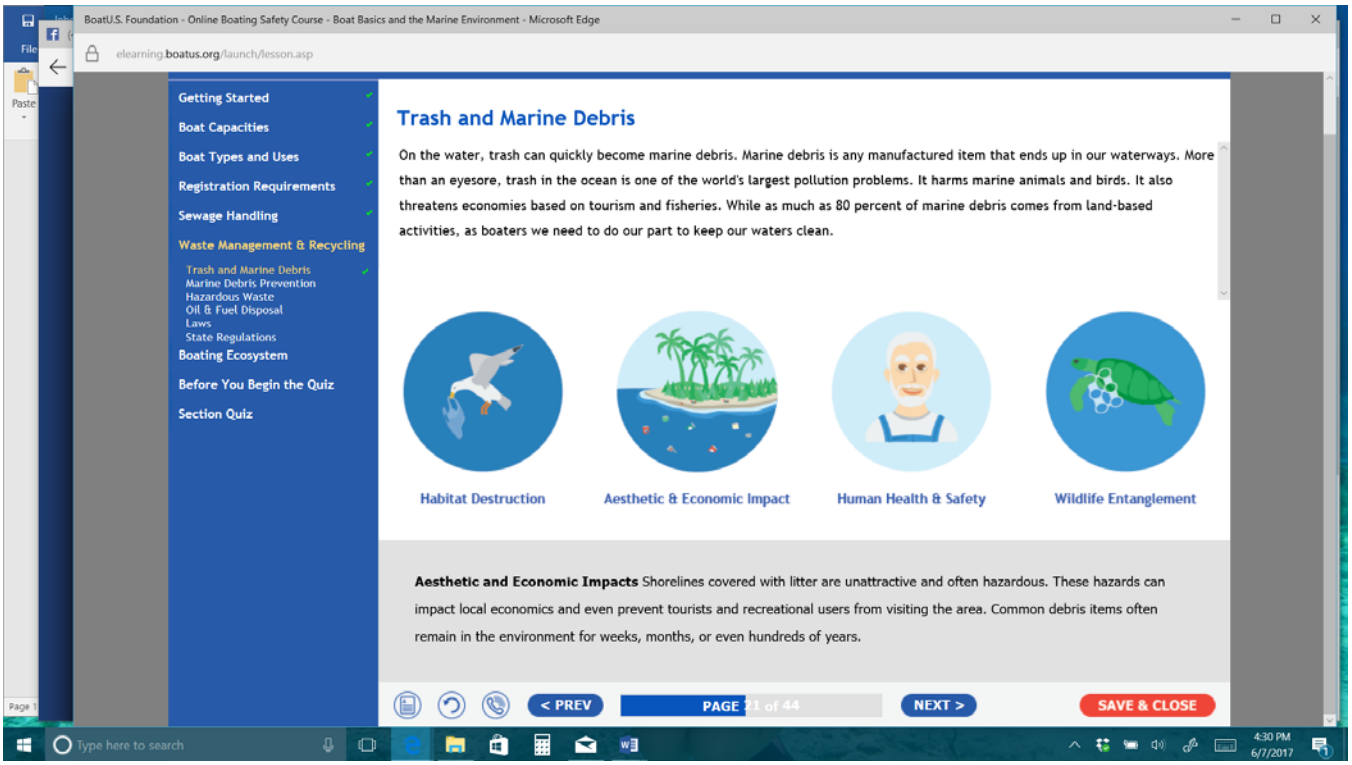
Boat US Foundation, Virginia Boating Safety Course

General Format: This free online course has 6 sections with an estimated time of completion of 6 hours. There is a significant amount of information in this course with a quiz at the end of each chapter that requires at least a 90% to pass each. The six sections include: Boat Equipment, Safe Boat Operation, Emergency Preparation, Boating Activities, Trip Planning and Preparation, Boat Basics and the Marine Environment. Boaters can choose to study these sections in any order. The course requires reading a lot of information with an assortment of videos and graphics inserted throughout. There are also some interactive exercises. Videos are narrated by both men and women. One video, in the section on Boat Basics and the Marine Environment about Sewage Handling and Pump-out is demonstrated and narrated by a young man (Figure 1).

Information on Marine Debris: One of the six sections for this course entitled "Boat Basics and the Marine Environment" contains a graphic on the problems caused by marine debris (Figure 2). There are two additional pages that cover marine debris prevention and laws and placard requirements. This section also contains a great deal of information on parts of a boat, types of hulls, capacity plates, registration, documentation and much more.

Other: Boat US Foundation also offers a free Clean Boating Course, and Clean Boating Courses specific to California, Massachusetts, New Jersey, North Carolina and Texas. There is a introductory video and interactive graphics narrated by a man. Topics covered include Boat Operation, Boat Maintenance, Fueling, Sewage, Waste Disposal and Recycling, and Your Boat Ecosystem. Demonstration videos include Fuel Handling,

Figure 1. Screenshots of pages on marine debris prevention and other relevant pages from Boat US Foundation course.


BoatU.S. Foundation - Online Boating Safety Course - Boat Basics and the Marine Environment - Microsoft Edge
elearning.boatus.org/launch/lesson.asp
Getting Started
Boat Capacities
Boat Types and Uses
Registration Requirements
Sewage Handling
Waste Management & Recycling
Trash and Marine Debris
Marine Debris Prevention
Hazardous Waste
Oil & Fuel Disposal
Laws
State Regulations
Boating Ecosystem
Before You Begin the Quiz
Section Quiz
Trash and Marine Debris
On the water, trash can quickly become marine debris. Marine debris is any manufactured item that ends up in our waterways. More than an eyesore, trash in the ocean is one of the world's largest pollution problems. It harms marine animals and birds. It also threatens economies based on tourism and fisheries. While as much as 80 percent of marine debris comes from land-based activities, as boaters we need to do our part to keep our waters clean.
Habitat Destruction
Aesthetic & Economic Impact
Human Health & Safety
Wildlife Entanglement
Aesthetic and Economic Impacts Shorelines covered with litter are unattractive and often hazardous. These hazards can impact local economics and even prevent tourists and recreational users from visiting the area. Common debris items often remain in the environment for weeks, months, or even hundreds of years.
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PAGE 21 of 44
NEXT >
SAVE & CLOSE
Type here to search
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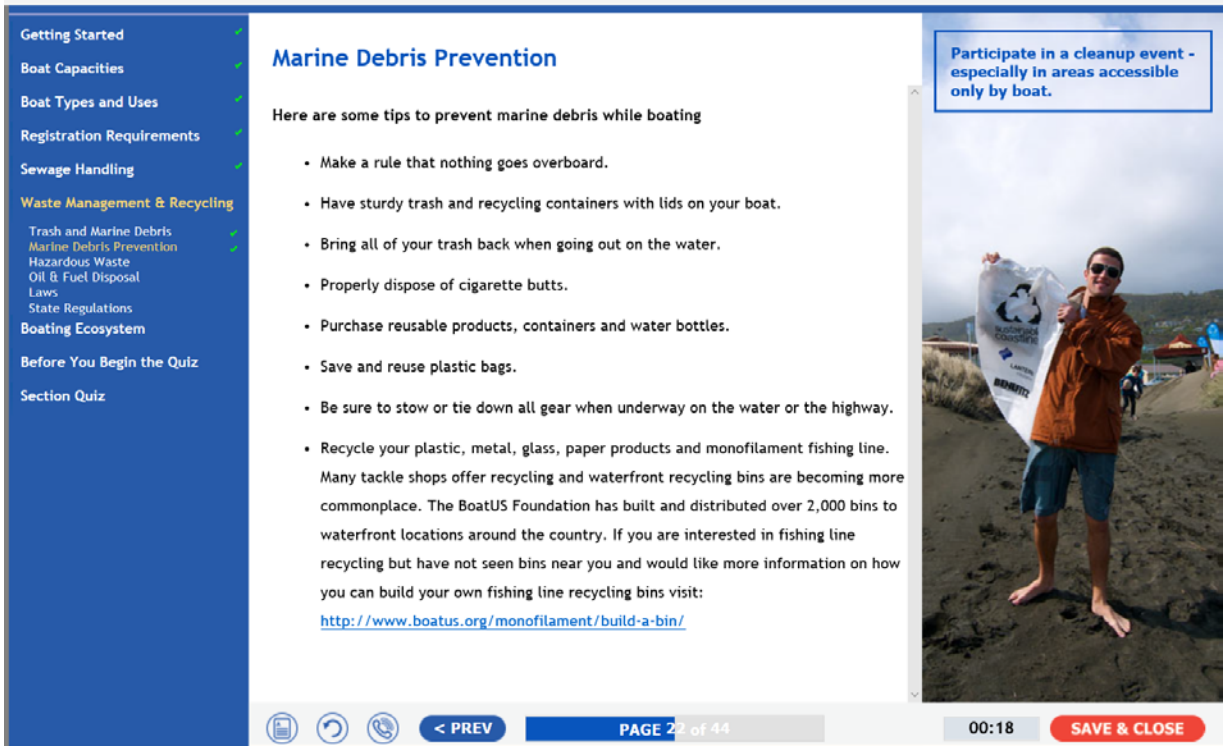
Getting Started
Boat Capacities
Boat Types and Uses
Registration Requirements
Sewage Handling
Waste Management & Recycling
Trash and Marine Debris
Marine Debris Prevention
Hazardous Waste
Oil & Fuel Disposal
Laws
State Regulations
Boating Ecosystem
Before You Begin the Quiz
Section Quiz
Marine Debris Prevention
Here are some tips to prevent marine debris while boating
• Make a rule that nothing goes overboard.
• Have sturdy trash and recycling containers with lids on your boat.
• Bring all of your trash back when going out on the water.
• Properly dispose of cigarette butts.
• Purchase reusable products, containers and water bottles.
• Save and reuse plastic bags.
• Be sure to stow or tie down all gear when underway on the water or the highway.
• Recycle your plastic, metal, glass, paper products and monofilament fishing line. Many tackle shops offer recycling and waterfront recycling bins are becoming more commonplace. The BoatUS Foundation has built and distributed over 2,000 bins to waterfront locations around the country. If you are interested in fishing line recycling but have not seen bins near you and would like more information on how you can build your own fishing line recycling bins visit:
http://www.boatus.org/monofilament/build-a-bin/
Participate in a cleanup event - especially in areas accessible only by boat.
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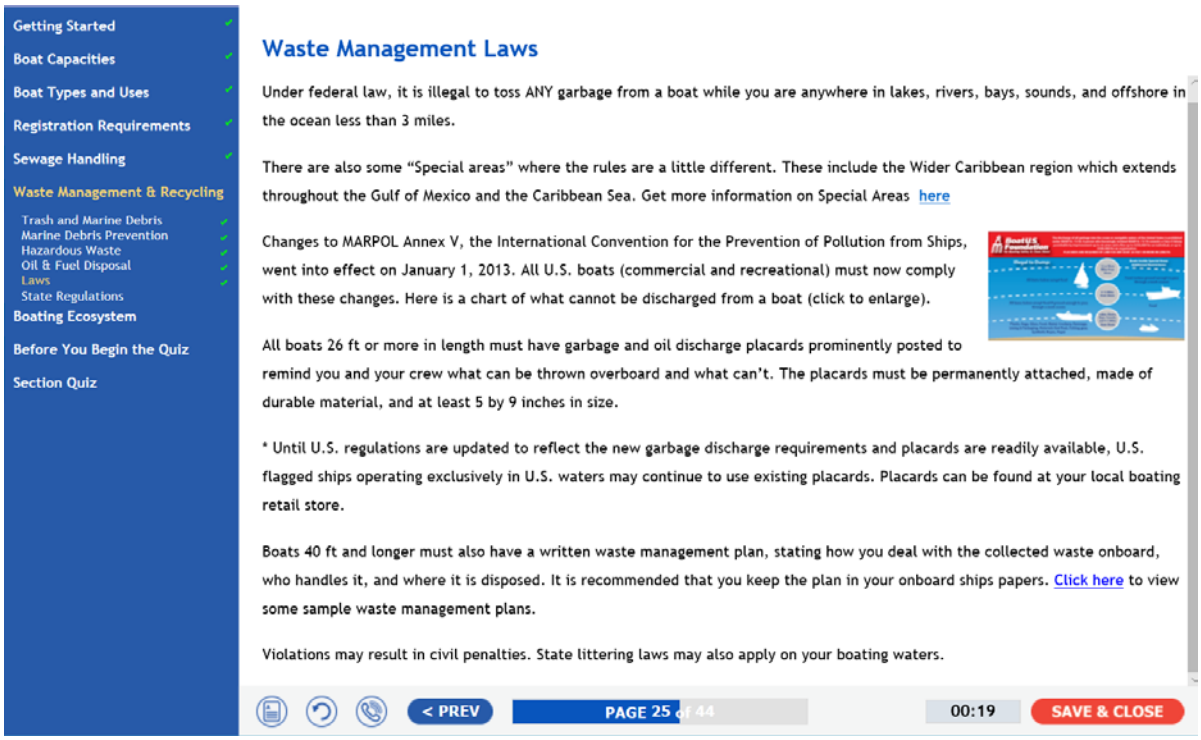
Getting Started
Boat Capacities
Boat Types and Uses
Registration Requirements
Sewage Handling
Waste Management & Recycling
Trash and Marine Debris
Marine Debris Prevention
Hazardous Waste
Oil & Fuel Disposal
Laws
State Regulations
Boating Ecosystem
Before You Begin the Quiz
Section Quiz
Waste Management Laws
Under federal law, it is illegal to toss ANY garbage from a boat while you are anywhere in lakes, rivers, bays, sounds, and offshore in the ocean less than 3 miles.
There are also some "Special areas" where the rules are a little different. These include the Wider Caribbean region which extends throughout the Gulf of Mexico and the Caribbean Sea. Get more information on Special Areas here
Changes to MARPOL Annex V, the International Convention for the Prevention of Pollution from Ships, went into effect on January 1, 2013. All U.S. boats (commercial and recreational) must now comply with these changes. Here is a chart of what cannot be discharged from a boat (click to enlarge).
All boats 26 ft or more in length must have garbage and oil discharge placards prominently posted to remind you and your crew what can be thrown overboard and what can't. The placards must be permanently attached, made of durable material, and at least 5 by 9 inches in size.
* Until U.S. regulations are updated to reflect the new garbage discharge requirements and placards are readily available, U.S. flagged ships operating exclusively in U.S. waters may continue to use existing placards. Placards can be found at your local boating retail store.
Boats 40 ft and longer must also have a written waste management plan, stating how you deal with the collected waste onboard, who handles it, and where it is disposed. It is recommended that you keep the plan in your onboard ships papers. Click here to view some sample waste management plans.
Violations may result in civil penalties. State littering laws may also apply on your boating waters.
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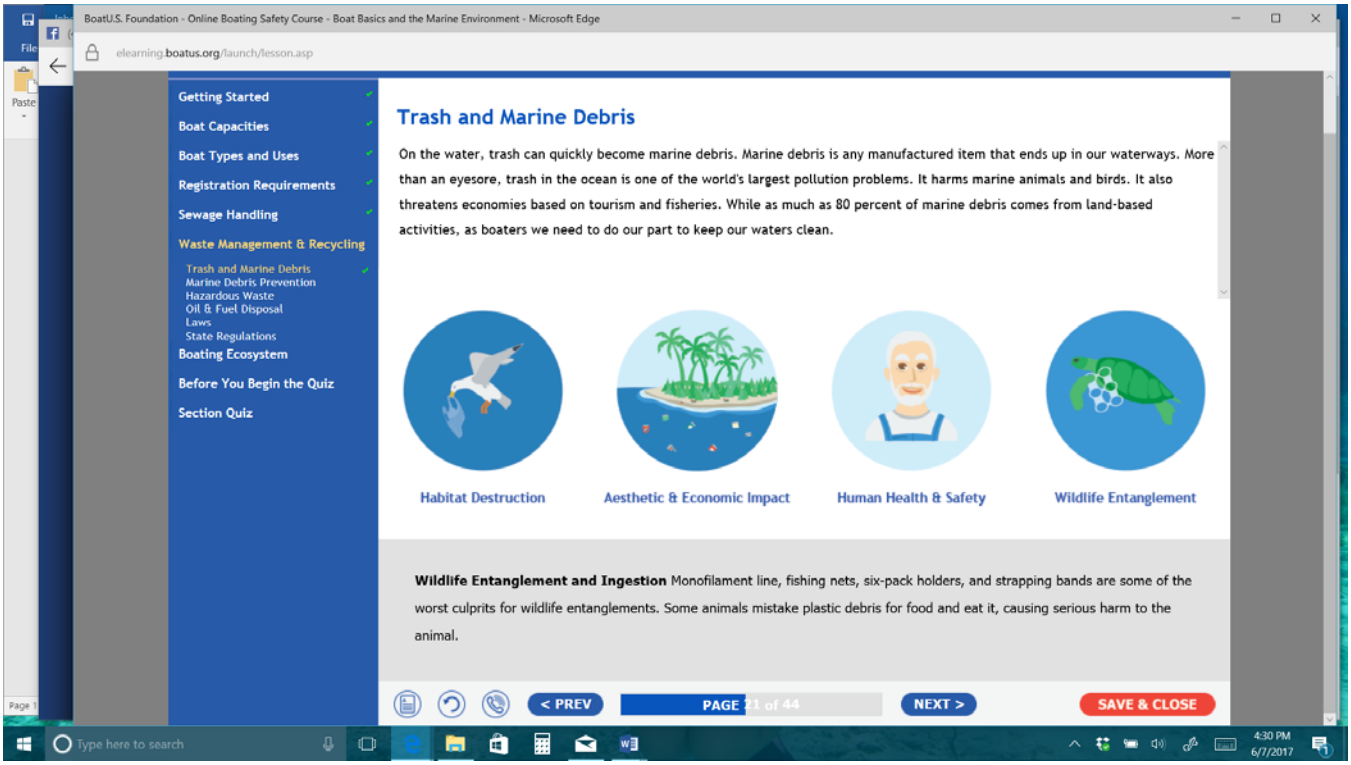
BoatU.S. Foundation - Online Boating Safety Course - Boat Basics and the Marine Environment - Microsoft Edge
elearning.boatus.org/launch/lesson.asp
Getting Started
Boat Capacities
Boat Types and Uses
Registration Requirements
Sewage Handling
Waste Management & Recycling
Trash and Marine Debris
Marine Debris Prevention
Hazardous Waste
Oil & Fuel Disposal
Laws
State Regulations
Boating Ecosystem
Before You Begin the Quiz
Section Quiz
Trash and Marine Debris
On the water, trash can quickly become marine debris. Marine debris is any manufactured item that ends up in our waterways. More than an eyesore, trash in the ocean is one of the world's largest pollution problems. It harms marine animals and birds. It also threatens economies based on tourism and fisheries. While as much as 80 percent of marine debris comes from land-based activities, as boaters we need to do our part to keep our waters clean.
Habitat Destruction
Aesthetic & Economic Impact
Human Health & Safety
Wildlife Entanglement
Wildlife Entanglement and Ingestion Monofilament line, fishing nets, six-pack holders, and strapping bands are some of the worst culprits for wildlife entanglements. Some animals mistake plastic debris for food and eat it, causing serious harm to the animal.
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Appendix B (Con't)
Boat US Foundation, Waste Disposal for Green Boating Video

General Format: This video available on Monkeysee.com, provides tips on how to reduce waste (i.e. trash) on a boat and sewage. It is narrated by Boat US Foundation President, Chris Edmonson and is 01:20 minutes in duration. It has been viewed more than 10,000 times to date.

Information on Marine Debris: A screenshot of the opening narration and complete transcript is provided below. An inquiry has been sent to Boat US Foundation as to where this video is currently used in their programs.

According to Alanna Keating, Outreach Manager with the Boat U.S. Foundation, this video was created by an outside agency, MonkeySee, to use as stock footage. Boat U.S. Foundation was asked to be featured in this video for their expertise in boating. Ms. Keating indicated that the video is now probably outdated in use and perhaps not of the high quality currently used in media.

http://monkeysee.com/waste-disposal-for-green-boating/

10,526 views

Script: Chris Edmonston: Hi! I am Chris Edmonston, President of the Boat U.S. Foundation. Today we are going to talk about a subject not many people want to think about but everybody has to deal with; waste disposal. So here are a few tips on how to help you reduce the amount of waste generated on your boat.

The first thing you can do is to reduce the amount of packaging and plastic you can take on board. If you have space, put a sturdy trash container with a lid on your boat. Obey the law; always keep garbage on the boat for onshore disposal or recycling. You should establish a boat rule that no trash gets thrown overboard, even apple cores or cigarette butts.

To tread lightly on the water, make sure you leave it and the marina cleaner than you found it. Carefully pick up trash left by others. Dispose of used fishing line properly, or better yet recycle it. Tangled fishing

line left in the water can harm boats and wildlife.

For sewage, you want to make sure you use onshore restrooms before you even leave the shore. Obey the law; keep untreated sewage out of all coastland and inland waters. If you haven't installed Type III toilet and you are boating in a no discharge zone, remember, by law you have to have your Y-valve security locked. And finally, know the location of the nearest pump out station or boat. Dispose of your waste properly and you will help keep our waterways clean and beautiful.

Appendix C
Proposed Scripts for Video to reach recreational boaters about preventing marine debris

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Once funding is secured to produce this video, the producers should determine if the "tone" of the video should be conversational, humorous, feature one narrator, or many. Below are two possible approaches.

Approach 1:

Hi, I'm xxx and this is my friend (name of turtle) an endangered sea turtle. There aren't many of you left in the world are there (little guy)? Sea turtles face a lot of (obstacles, hurdles, curve balls, play on words here depending on spokesman) to survive. But did you know turtles and other marine animals are injured by just plain old garbage? Yes our trash--it's way more than just a litter problem.

Like this sea turtle. He was found by kayakers with a plastic bag wrapped around his flippers. Unfortunately, the bag was wrapped so tightly that by the time he arrived at the Virginia Aquarium, there was only one thing to do. They had to amputate his flipper to save his life.

But this was one of the lucky ones. Each year thousands of sea turtles, dolphins, whales and sea birds are never rescued and die from entanglement in our plastic garbage--bags, fishing line, rope, nets

even plastic stuff you would never think to be dangerous—like this plastic lid.

Plastic garbage floating in the water can also look like real food to wildlife.

Plastic bags and balloons

can look like jellyfish—a favorite sea turtle food.

This plastic CD case was the only thing found in the stomach of this whale that became disoriented and eventually died in a river in Norfolk Virginia.

And even the smallest plastic pieces can resemble crabs and fish eggs.

This is not what the inside of a baby sea bird should look like.

And these are tiny pieces of plastic found in fish. Think about it…who else eats fish? Do you? Did you ever think you could actually be eating your own garbage? Have I gotten your attention yet?

Hey, as boaters I know we all love the water. I also know we care about the animals we share the water with. So here are some easy steps we can take to help keep trash out of our waterways.

First one is obvious. Never throw trash, including cigarettes butts, in the water. It's not only the right thing to do, it's the law.

Before you set out, remove all excess packaging and be sure to stow or tie down all gear when underway to reduce the chances for it to be blown overboard.

Be sure to have a bucket or other container with a lid designated for trash and make sure it's out of the wind.

Avoid running over buoys and other types of commercial fishing gear.

Even when it's not yours, if you see trash out on the water, pick it up. It's actually a good way to practice your man overboard drills.

And if your boat is 26 feet or bigger, you're going to need a Garbage Disposal Placard. It's a good way to remind everyone about the rules.

On behalf of everyone that shares our waters, including those with fins, flippers and feathers, thank you! Wishing you fair winds and CLEAN following seas.

Approx. 500 words – Goal 150 per minute x 3 is 450 word max

Messages to perhaps add:

- Take your trash onshore for disposal or recycling.
- Use re-usable items whenever possible (coffee mugs, etc.)
    - Enforce a rule on your boat that no trash gets thrown overboard, including cigarette butts.
    - Be sure to dispose of used fishing line properly, or recycle it.

Appendix D
Overview of Mass Balloon Release Research Tools and Findings

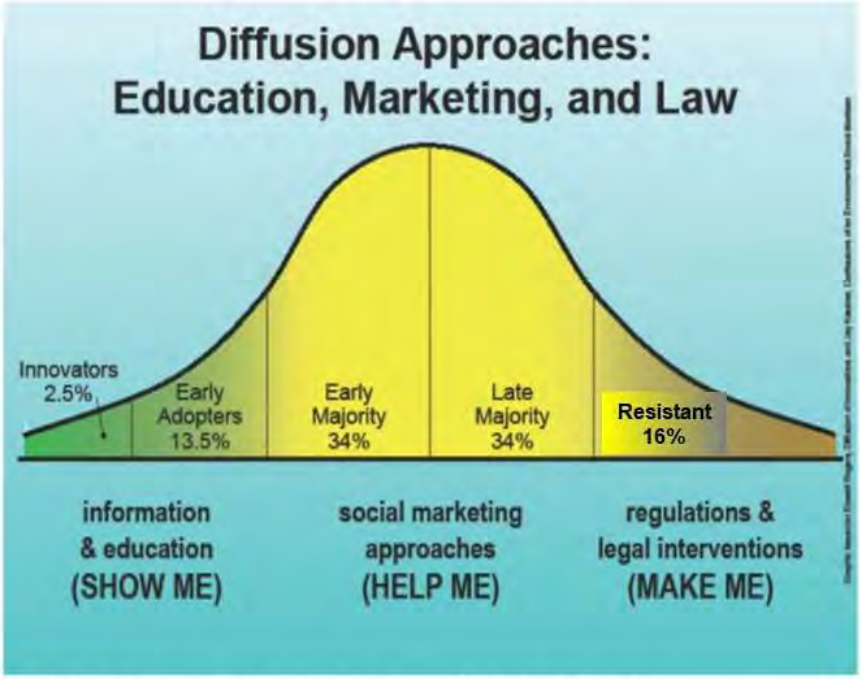
Project Overview

This report details research conducted into the causes of mass balloon releases in Virginia. This research was undertaken to help inform a behavior change campaign, grounded in the Community Based Social Marketing model.

Formative research was conducted during 2015 and 2016. OpinionWorks developed the research tools and implemented much of the research described in this report. Steve Raabe led the research team for OpinionWorks. Under the design of this project, Virginia Witmer of the Virginia Coastal Zone Management Program (CZM), and Katie Register of Longwood University and Clean Virginia Waterways, also conducted some of the research and received mentoring on designing and conducting focus groups.

Community Based Social Marketing

A bell curve is familiar to all of us. In popular culture, we often apply this curve to adoption of technology, with technology "early adopters" on the leading edge, and late (or never) adopters on the tail end of the curve. The majority of the population falls in the middle of the adoption curve. With credit to Dr. Nancy Lee of the University of Washington and a social marketing expert, this same curve can be applied to environmental behavior adoption, as follows. (Note that the percentages shown in this graphic are illustrative only and not associated specifically with balloon releases.)



Credit: Nancy R. Lee, University of Washington & Puget Sound Partnership
Adapted from Everett Rogers, Jay Kassirer, Mike Rothschild, Dave Ward, Kristen Cooley

- In this model, early behavior adopters are referred to as "Show me's," in other words, "Just show me what to do and I'll do it!" When it comes to environmental behaviors, this is the group that just needs to be told what to do and they will do it almost immediately.
- At the far end of the curve are the "Make me's," environmentally recalcitrant people who do not want to undertake environmental behaviors and need to be compelled to do so through mechanisms like fines and regulations.

- Most people fall in the "Help me" group. These are people who are well-intentioned, wanting to take the environmentally-beneficial action, but needing more than just information to encourage them to act. Perhaps they need a little help, or a financial incentive, or a prompt to remind them to act. That extra push that encourages the "Help me" group to act is what defines social marketing.

Nancy Lee and colleagues have identified several steps to follow when developing a social marketing campaign. Formative research, like that described in this report, is designed to follow and inform this process.

How Do We Reach the Help Me Group?

1. Identify the specific behavior you want the audience to take
2. Pinpoint your target audience
3. Assess the barriers to the action
4. Find the benefits and motivators that will overcome those barriers
5. Refine your messages, incentives, and tools, and determine where and how you will deliver them to the target audience

For this project, the behavior is the mass release of helium balloons at gatherings such as weddings, graduations, memorials, awareness raising events, and the like.

The ultimate target audience are the participants in these gatherings, in other words, those who attend the events and release individual balloons. This project has also targeted a "midstream" audience of people who might authorize or influence balloon releases, such as wedding planners and brides, school principals, directors of event venues, etc.

Research Method

Several research techniques were employed to understand the behaviors and motivations of these audiences, and they are described below.

- Some of the formative work was secondary research analyzing news accounts of balloon releases, and social media and blog posts by brides. This work was conducted directly by Katie Register, Virginia Witmer, and staff or graduate students assisting them and is described elsewhere in the reporting for this project. In short, however, the formative secondary research helped identify several key facts about balloon releases which have helped shape this inquiry.

- A statewide survey of Virginians was conducted between March and June 2015, both online and in-person. The link to the survey was propagated through multiple means, and a hard-copy version of the questionnaire was distributed in target areas of Hampton Roads and the Richmond area. Though not a true random sample of the Commonwealth's population, the survey did reach 893 interviews statewide and provided a good picture of balloon release activity and attitudes among Virginians.

Thank you for taking part in this study for Longwood University about the use and release of helium balloons. This survey is voluntary and confidential. You will not be asked for your name or other personal identifying information, and your responses will not be connected back to you in any way.

1. In the last 10 years or so have you taken part in an event or ceremony where balloons were released, for example at a wedding, at school, at a memorial service, to call attention to a cause, or something like that?
   - ○ Yes *(if "Yes", continue with Q3)*
   - ○ Can't remember *(continue with Q12)*
   - ○ No *(if "No", continue with Q2)*

2. Why haven't you taken part in a balloon release event or ceremony?
   - ○ I have not been invited or have never been present to take part in one
   - ○ I have been invited and would have taken part, but was not available
   - ○ I have been invited to take part but did not want to

   (Continue with Q12)

3. About how many times in the last 10 years have you taken part in an event or ceremony where balloons were released?
   Enter a number:

4. During what months of the year have you taken part in a balloon release? *Mark any that apply*
   - ☐ Spring (Mar, Apr, May)
   - ☐ Summer (Jun, Jul, Aug)
   - ☐ Fall (Sep, Oct, Nov)
   - ☐ Winter (Dec, Jan, Feb)
   - ☐ Can't remember

5. The most recent time you took part in a balloon release, what was the cause or reason for the balloon release? *Mark one.*
   - ○ Wedding
   - ○ Funeral or memorial service
   - ○ Sporting event
   - ○ Religious worship
   - ○ To raise awareness for an issue or cause
   - ○ Some other reason
   - ○ Can't remember

6. That most recent time, where did the balloon release take place? *Mark one.*
   - ○ School
   - ○ Church or other house of worship
   - ○ Park
   - ○ Hospital
   - ○ Community Center
   - ○ Some other place
   - ○ Can't remember

7. How would you describe the area where the balloons were released? *Mark any that apply*
   - ☐ Urban area
   - ☐ Suburban area
   - ☐ Small town
   - ☐ Rural area
   - ☐ Within a few miles of the ocean or Chesapeake Bay

8. Was the balloon release event in Virginia or outside Virginia?
   - ○ In Virginia
   - ○ Outside Virginia

9. As far as you know, was this part of an annual or a one-time event?
   - ○ Annual
   - ○ One-time
   - ○ Don't know

10. What were the feelings that you experienced as the balloons were being released?

11. As the balloons were being released, did you think about where the balloons would end up after they went out of view?
    - ○ No
    - ○ Yes, a little
    - ○ Yes, a lot

    (Continue with Q12)

12. Which of these best describes what happens to balloons when they are released into the air? *Mark one.*
    - ○ Disintegrate or break into very small bits in the atmosphere
    - ○ Float out into space
    - ○ Fall to the ground or water and break down naturally
    - ○ Fall to the ground or water and do not break down
    - ○ Something else:

13. If you are invited to take part in a balloon release in the future, or if you attend an event where one occurs, how likely are you to take part?
    - ○ Very likely
    - ○ Somewhat likely
    - ○ Might or might not
    - ○ Somewhat unlikely
    - ○ Very unlikely

14. Do you have any other comments you would like to make about balloon releases?
    - ○ Yes *(please write comments on other side)*
    - ○ No

15. What is your age?
    - ○ Less than 18
    - ○ 18 to 34
    - ○ 35 to 49
    - ○ 50 to 64
    - ○ 65 or older

16. What is the last grade in school you completed?
    - ○ Up to 11th Grade
    - ○ High school diploma or GED
    - ○ Attended college or technical school
    - ○ Bachelor's degree
    - ○ Graduate degree

17. What is your gender?
    - ○ Female
    - ○ Male

18. What is your home zip code?

OPINIONWORKS PUBLIC SPIRITED RESEARCH

- For comparison and additional context, a question about participation in balloon releases was added to a randomly sampled statewide survey of 594 Marylanders conducted by OpinionWorks February 26 – March 8, 2015. These survey results, indicating that 20% of Maryland residents had taken part in a balloon release ceremony during the previous 10 years, had a margin of sampling error of ±4.0% at a 95% confidence level.
- Seven probing telephone interviews were conducted by OpinionWorks among organizers of balloon releases in order to understand their motivations and influences.
- In-person interviews were conducted among retailers who sell helium balloons to gain insight into customer and retailer motivations. These interviews were conducted by Katie Register, Virginia Witmer, and other team members.
- Focus groups were conducted in Richmond (2 groups, July 20, 2015), Virginia Beach (2 groups, December 15, 2015), and Roanoke (1 group, January 20, 2016). Four of these five groups were conducted among people who had participated in balloon releases, with one of the Richmond groups conducted among school principals who had experienced a balloon release on their school property; that group was conducted virtually, using a shared screen technology, so that principals from across Virginia could take part. The Richmond focus groups were moderated by OpinionWorks' staff, Kathy Flament, and the succeeding groups were facilitated by Katie Register and Virginia Witmer based on a discussion guide developed by OpinionWorks.

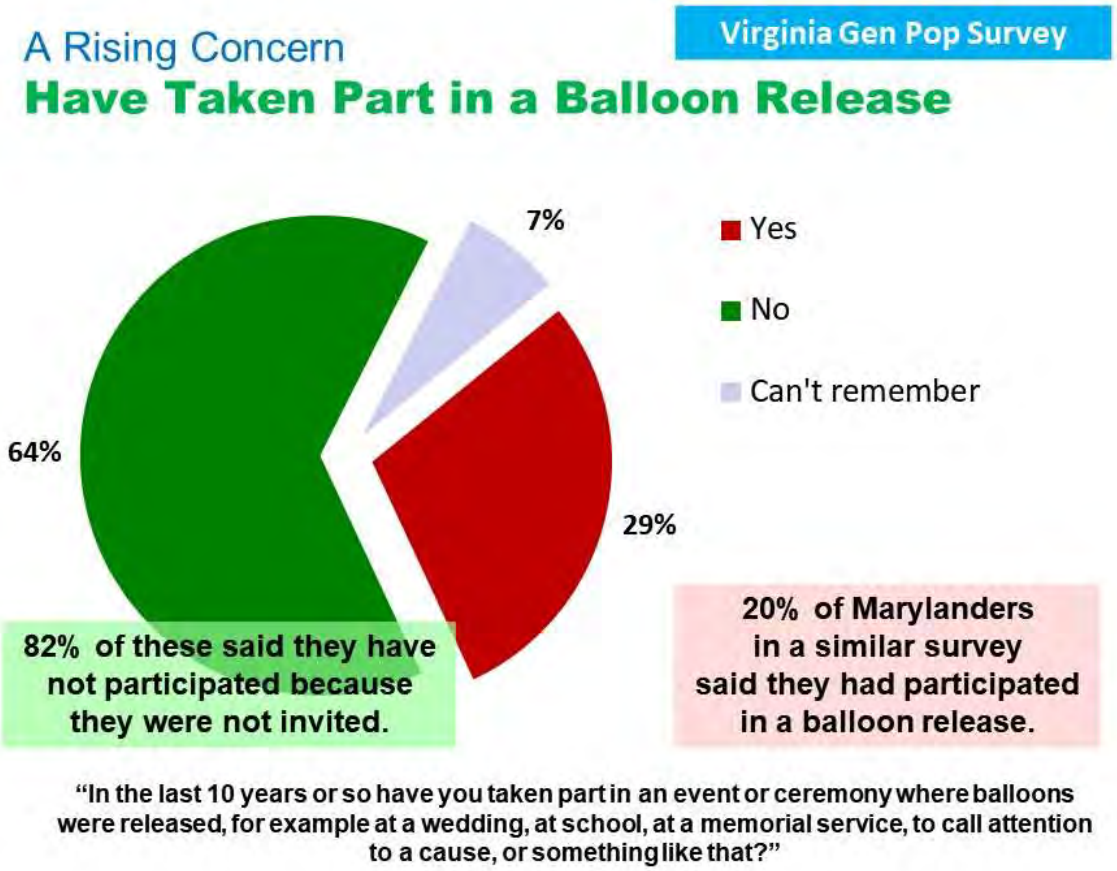
Findings of this research program follow.

Key Findings of This Formative Research

How Widespread are Balloon Releases?

The percentage of the public that participates in ceremonies or events where helium balloons are released appears to lie between 20% and 29%, offering a sense of how widely balloon releases involve the general public. Specifically, we can make these observations from the survey:

As illustrated below, based on the statewide survey of Virginia residents, more than one-quarter (29%) of the population said they have "taken part in an event or ceremony where balloons were released, for example at a wedding, at school, at a memorial service, to call attention to a cause, or something like that."

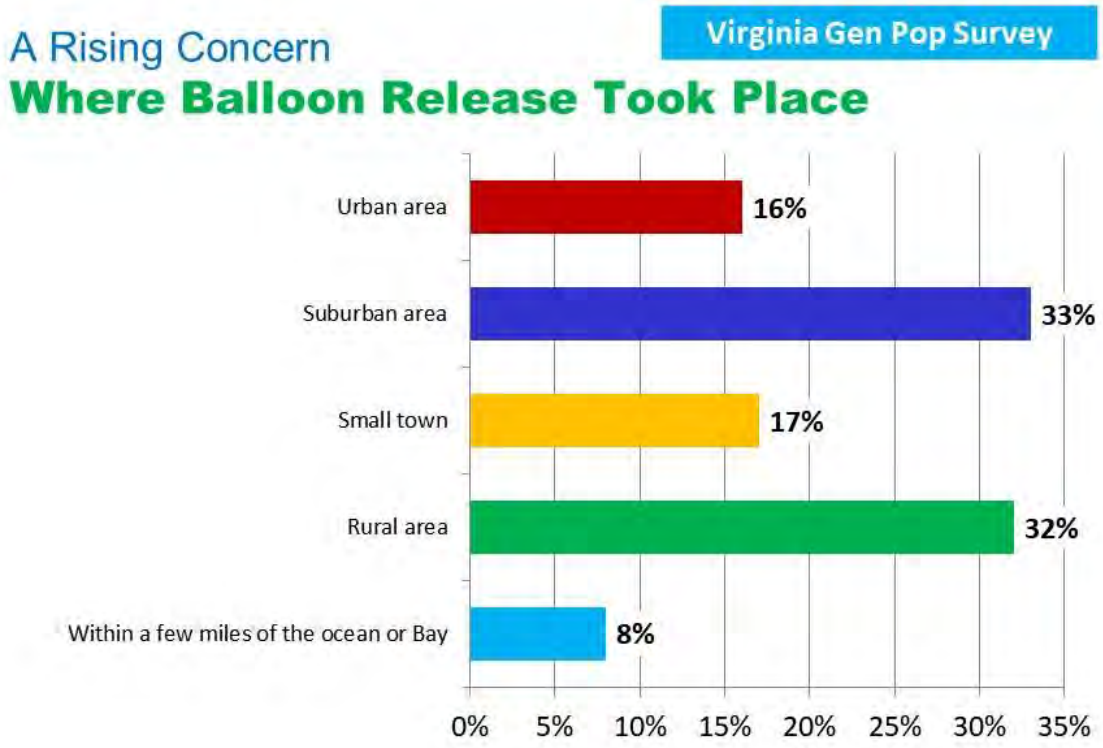


For comparison, in the scientific statewide telephone survey conducted in neighboring Maryland, 20% of the State's population said they had taken part in such a balloon release event.

Based on segmented results from the Maryland survey, participation in balloon releases is significantly higher in the State's 14 rural counties, reaching 27% of the public, compared to 20% statewide.

There is evidence in both surveys that balloon releases are less frequent in heavily urbanized areas, as well as areas that adjoin the ocean or the Chesapeake Bay. Balloon releases appear to be somewhat more frequent in suburban and rural areas upstream and in the Piedmont.

According to the Virginia survey, 16% of balloon releases took place in urban areas, 33% in suburban areas, 17% in small towns, and 32% in rural areas. Only 8% of balloon releases took place within a few miles of the ocean or Chesapeake Bay. Focus group comments affirmed that people felt more comfortable releasing balloons in places where they felt the balloons may not have as much impact.

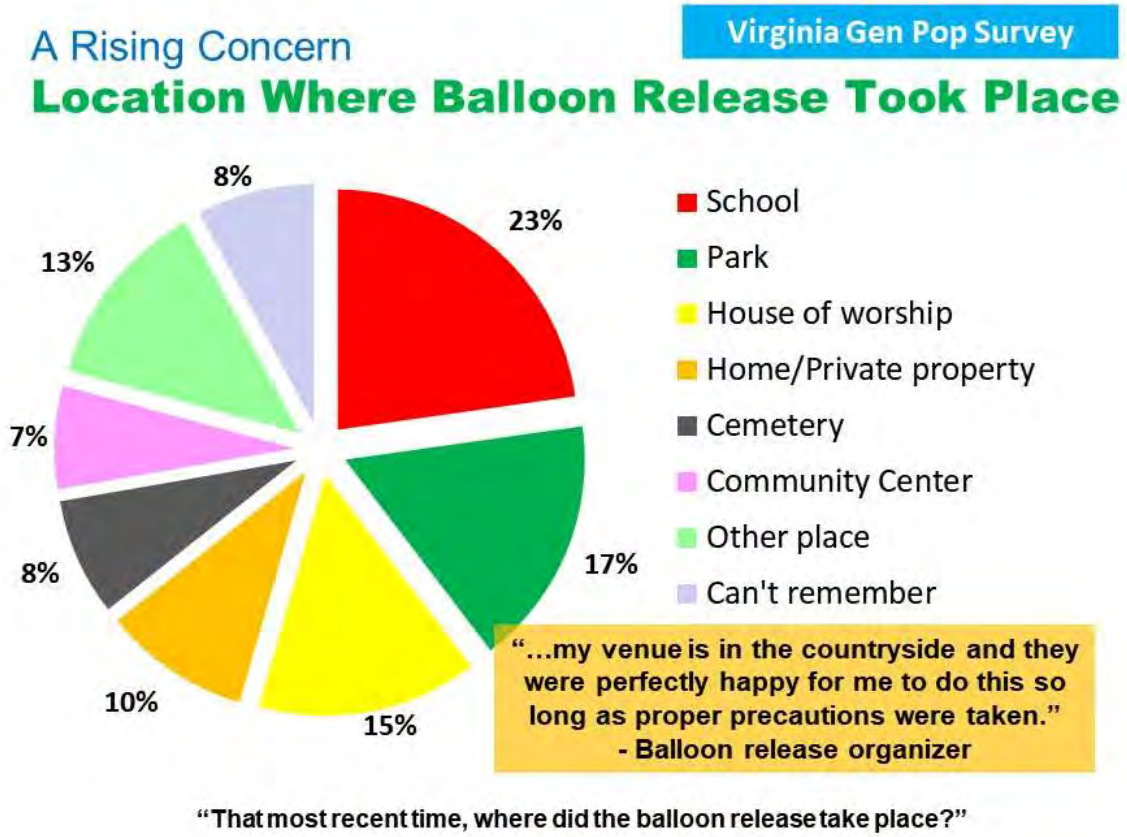


"How would you describe the area where the balloons were released? Mark any that apply."

Significantly, among the almost two-thirds of Virginians who said they had *not* participated in a balloon release in the prior 10 years, 82% said that was because "I have not been invited or have never been present to take part in one." Only 15% of non-participants (in other words 9% of Virginians overall) said they had been invited to a balloon release but did not *want* to participate. That 9% compares to the 29% who said they *have* participated in a balloon release. In addition to what a person wants to do, one can imagine the subtle social pressure to take part in a balloon release at a wedding or a memorial service. These findings indicate that for many Virginians, balloon releases are still a social norm.

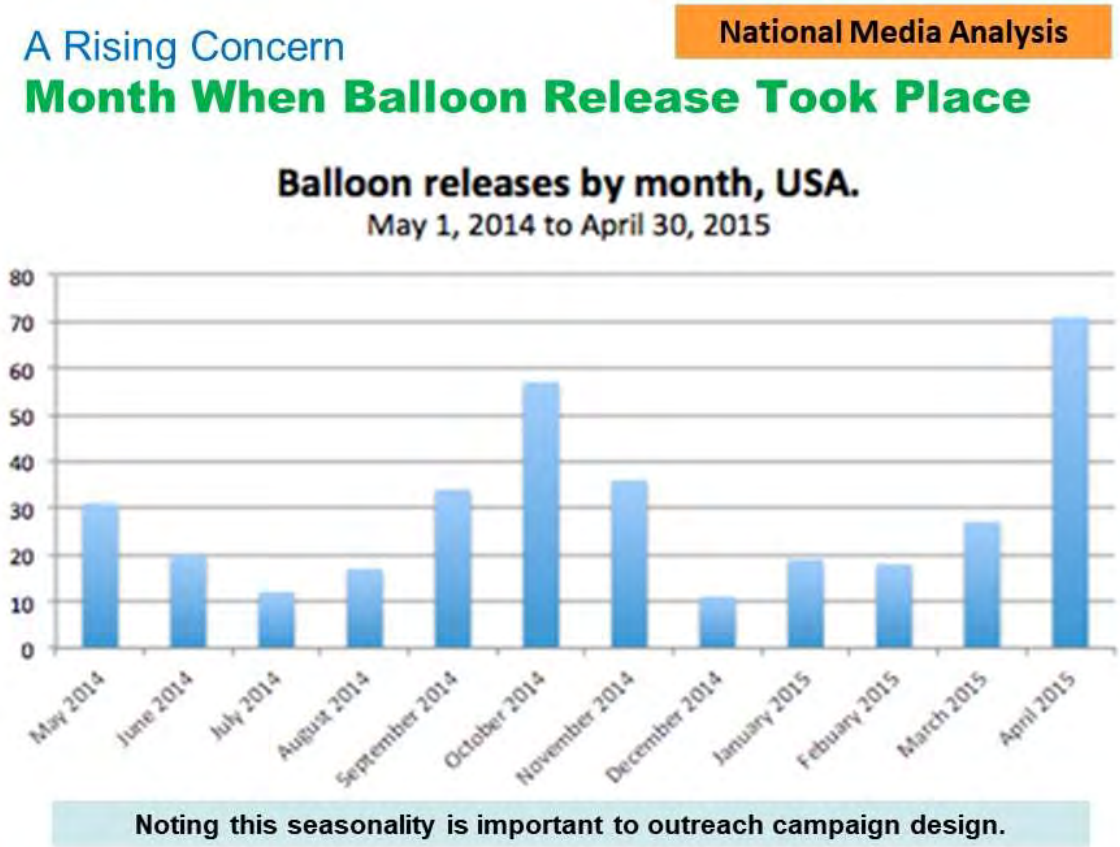
Where Balloon Releases are Taking Place

Knowing the venue where balloon releases take place is helpful to prioritizing outreach where it will have the most impact. Based on the Virginia statewide survey, balloon releases are most likely to take place at schools, with 23% of the people who said they had taken part in a balloon release recalling that their most recent balloon release took place at a school. The next most common venues were parks (17%), followed by churches and other houses of worship (15%), homes or private property (10%), cemeteries (8%), and community centers (7%).



Seasonality of Balloon Releases

Another important finding was the time of year when balloon releases are most likely to occur. What emerged was a seasonality to balloon releases focused on the Spring and the Fall. Analysis nationally by Katie Register of balloon releases mentioned in the news media showed a spike in April, and another spike in October, with somewhat lower but notable numbers in the adjoining months of May, September, and November.

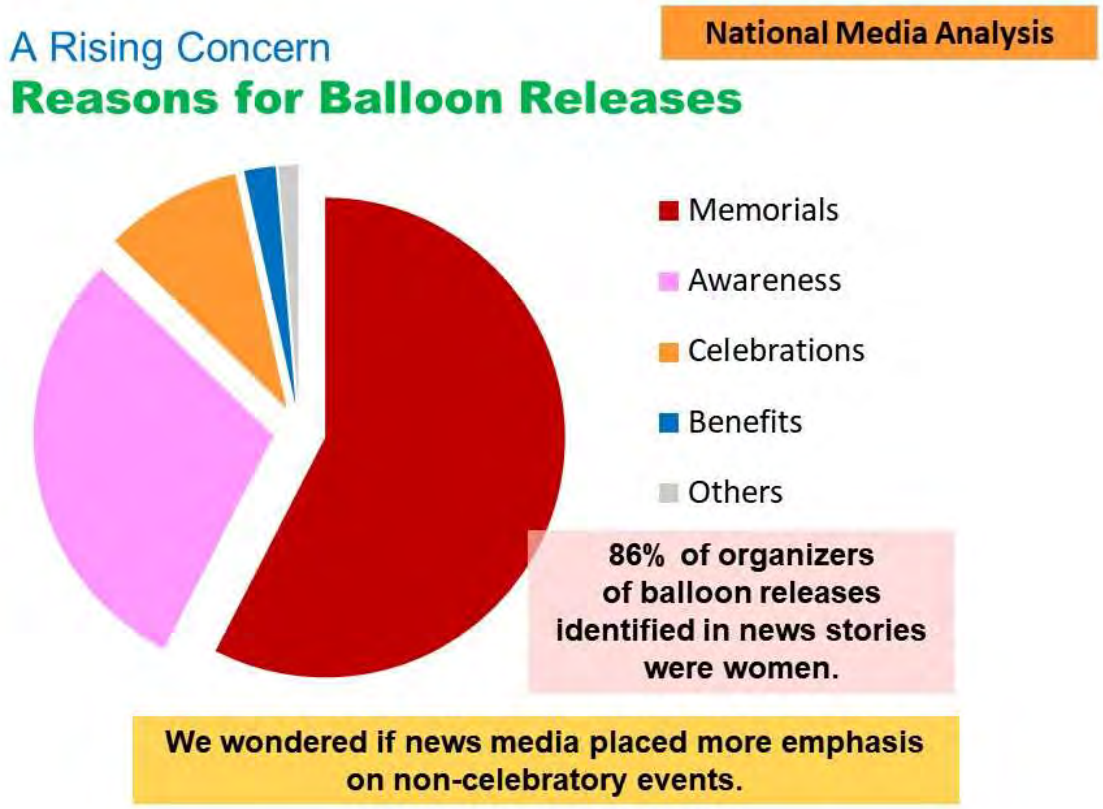


This finding offers an opportunity for staging an outreach campaign in the months prior to these spikes, as event organizers and other specifiers are planning their commemorations and events. Given the high number of releases at schools, parks, and houses of worship, one could anticipate that many of these release events relate to commemorations such as graduations, major sporting events, and the like, as well as milestones such as weddings.

Why Balloon Releases Take Place

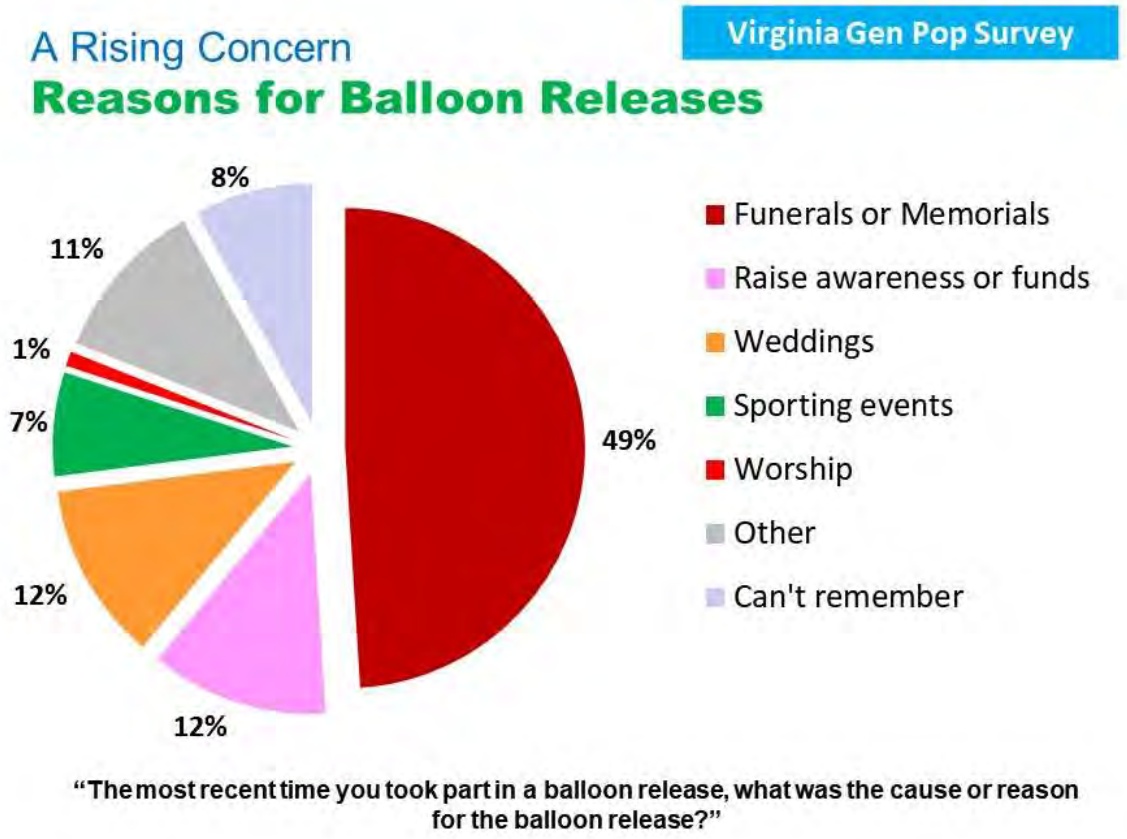
The national media analysis was conducted before the Virginia general population survey took place. The media analysis provided an early look at why balloon releases take place – with the known limitation that some types of balloon release events may be deemed by editors as more newsworthy than others, notably memorials, missing persons, cause-related and awareness-raising events, or events connected to prominent local institutions.

With that limitation in mind, the media analysis revealed a very strong incidence of memorials, accounting for more than half of balloon release events covered by the media. Awareness-raising events accounted for approximately one-third of all events.



As an important footnote to the media analysis, 86% of all balloon release event planners, coordinators, and spokespeople identified in the media were women, giving a very strong clue to one characteristic of those who specify balloon releases, and who should be a primary target audience of the campaign.

The Virginia statewide survey provided a more stratified accounting of the reasons for balloon release events, based on respondents' recollection of their most recent balloon release experience. Funerals and memorials remained the most important reason by far, accounting for half (49%) of all balloon releases. Raising awareness or funds for an issue or cause was second at 12%, tied with weddings at 12%. Sporting events followed at 7%, and worship at 1%, with a smattering of other individual reasons offered.



Emotional Reactions to Balloon Releases

Ultimately, it is the human emotional reaction to balloon releases that is driving participation in these events. As was known anecdotally, and as this research made clear, the emotional response to a mass release of balloons is often palpable, stirring, and sometimes cathartic. These emotional stimuli are so strong that they represent a significant barrier to preventing balloon releases.

Several key ideas emerged from the interviews with balloon release organizers, as illustrated in the visual below:

- For the bereaved, the release of balloons often symbolizes a sense of peace, release from sorrow, and even communication with the departed person. Accounts of this emotional response can be very moving.
- For causes such as autism awareness, balloon release coupled with knowledgeable speakers can lead to "a very thought-provoking moment," as described below.

A Rising Concern

Interviews

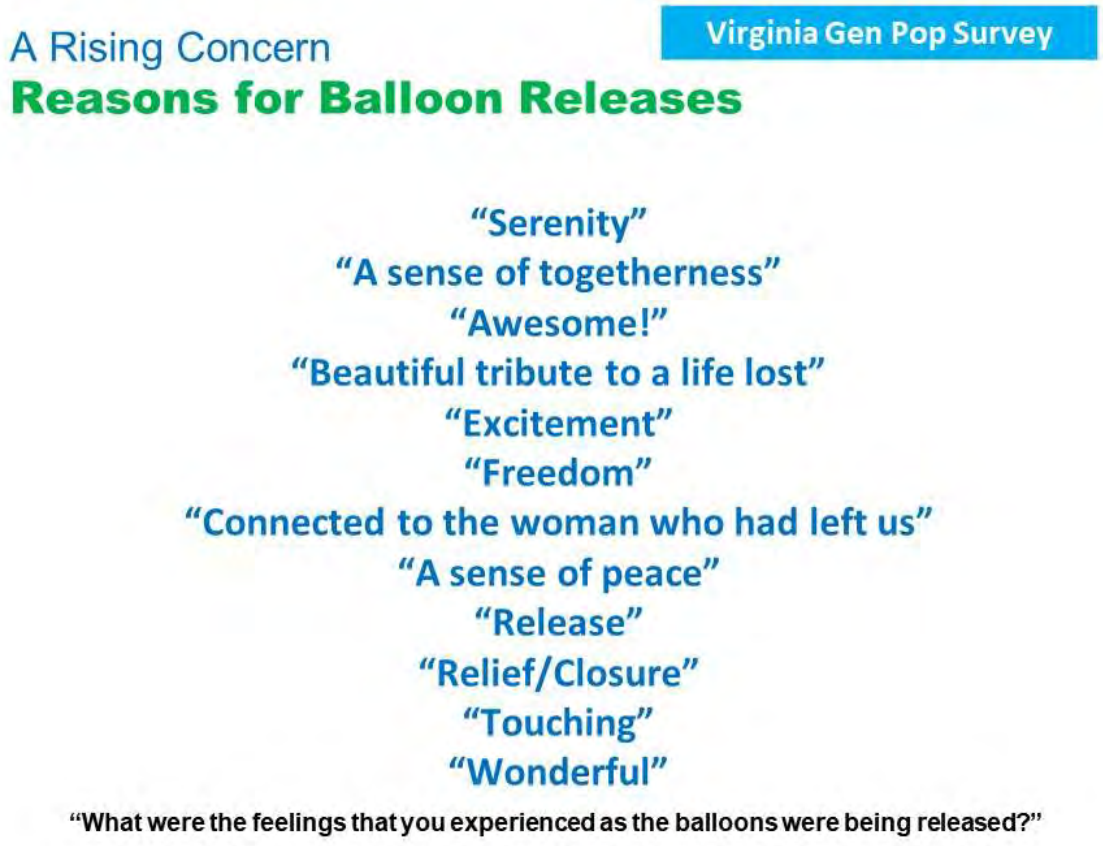
Reasons for Balloon Releases

"When I lifted my eyes to see the balloons going up to the sky, I felt a peaceful emotion of hope in my sorrow as a widow. Through that wonderful experience, I remembered that my help to pass that painful moment will come from heaven."

"Faculty and students were excited. The autism speech and the release of the balloons resulted in a very thought-provoking moment."

"My 5-year-old son died one year ago and we had a balloon release at his funeral and at a 5k held in his honor. I feel like I am sending them to him and it gives us peace."

On the general population survey of Virginians, people who had experienced balloon releases described similar feelings, using words found in the visual below. Once again, a strong sense of sense of gratification, stimulation, and well-being comes through in these descriptions.



When it comes to event organizers, particularly brides who are planning their own weddings, comments indicated a combination of rationalization and a little bit of defiance. When it comes to littering, drawing from our broader body of work, people tend to rationalize their own contribution as small and insignificant, even benign. The issue of releasing balloons appears to be no different.

A Rising Concern

Reasons for Balloon Releases

Interviews

"I will do what I want on my wedding day – *it is my day!*"

"…just because I'm doing a balloon release doesn't mean I don't care."

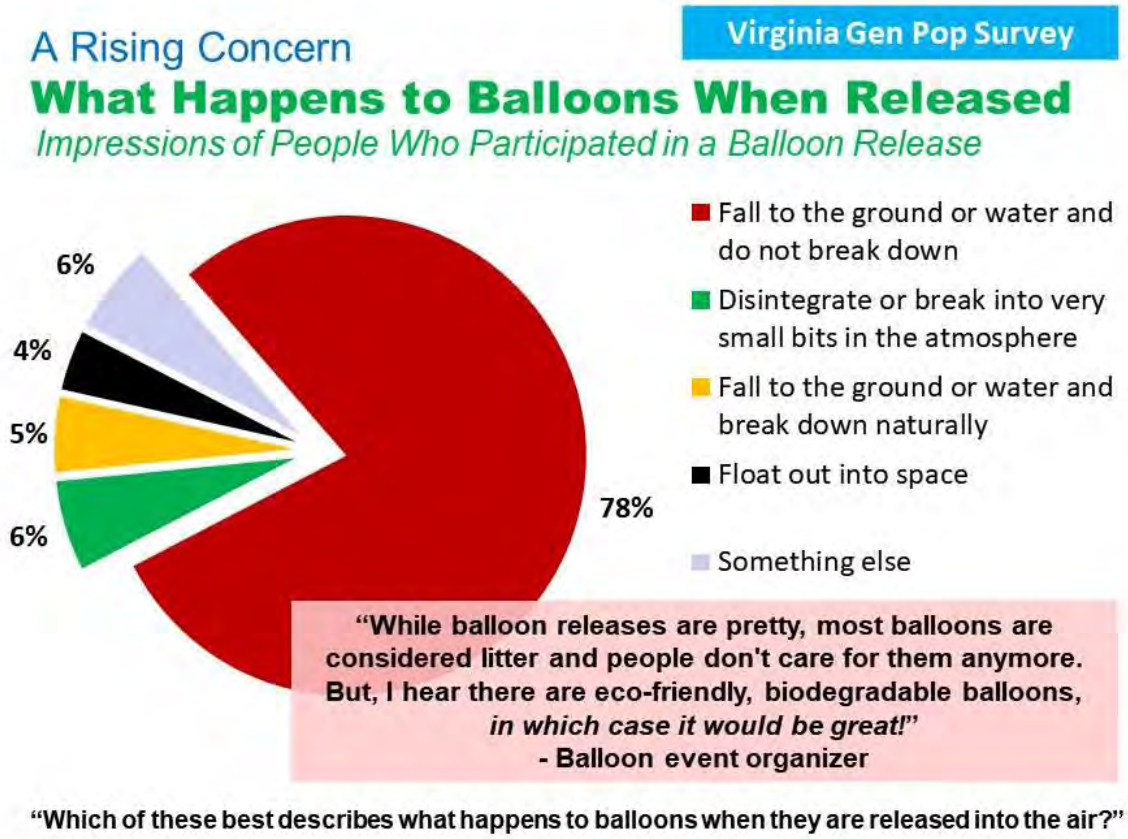
"…I personally don't see 3 balloons causing much of an issue."

"Do what you want to do. The animals will be fine. I'm sure all these people telling you not to (release balloons) still drive cars and use hairspray or other chemicals dangerous to animals."

Impressions of What Happens to Balloons Once They are Released

Entering this project, there was some anecdotal evidence that people believe that balloons disintegrate harmlessly in the atmosphere, or even continue floating off into space. In fact, this research strongly disproved that such ideas are widespread. Almost four out of five people (78%) responding to the Virginia statewide survey, when given four specific options, affirmed that balloons released into the air "fall down to the ground or water and do not break down."

Only 6% said balloons "disintegrate or break into very small bits in the atmosphere." Five percent said balloons "fall to the ground or water and break down naturally," and 4% said they "float out into space."



It was clear in focus group discussion that some balloon release participants are aware of the conflict between their knowledge of balloon litter, and their own desire to take part or plan a balloon release event. It is when confronted with that conflict that rationalizations and even defiant reactions occur, as demonstrated in this work. From a behavior change standpoint, this collision of negative realizations and positive gratification offers an opportunity to make headway with the audience, assuming campaign organizers can provide meaningful and compelling alternatives to balloon releases, and avoid slipping into a preachy, dogmatic mode of messaging.

Breaking Through to the Audience

Considerable attention was spent in the focus groups exploring counter-measures that would break through to participants. Images of balloon impacts were tested as a means of identifying wedges that could move people to think and act differently about releasing balloons. These fell into four categories that were initially tested in the July 2015 (Richmond) focus groups, and later refined in the testing that occurred in December 2015 (Virginia Beach) and January 2016 (Roanoke).

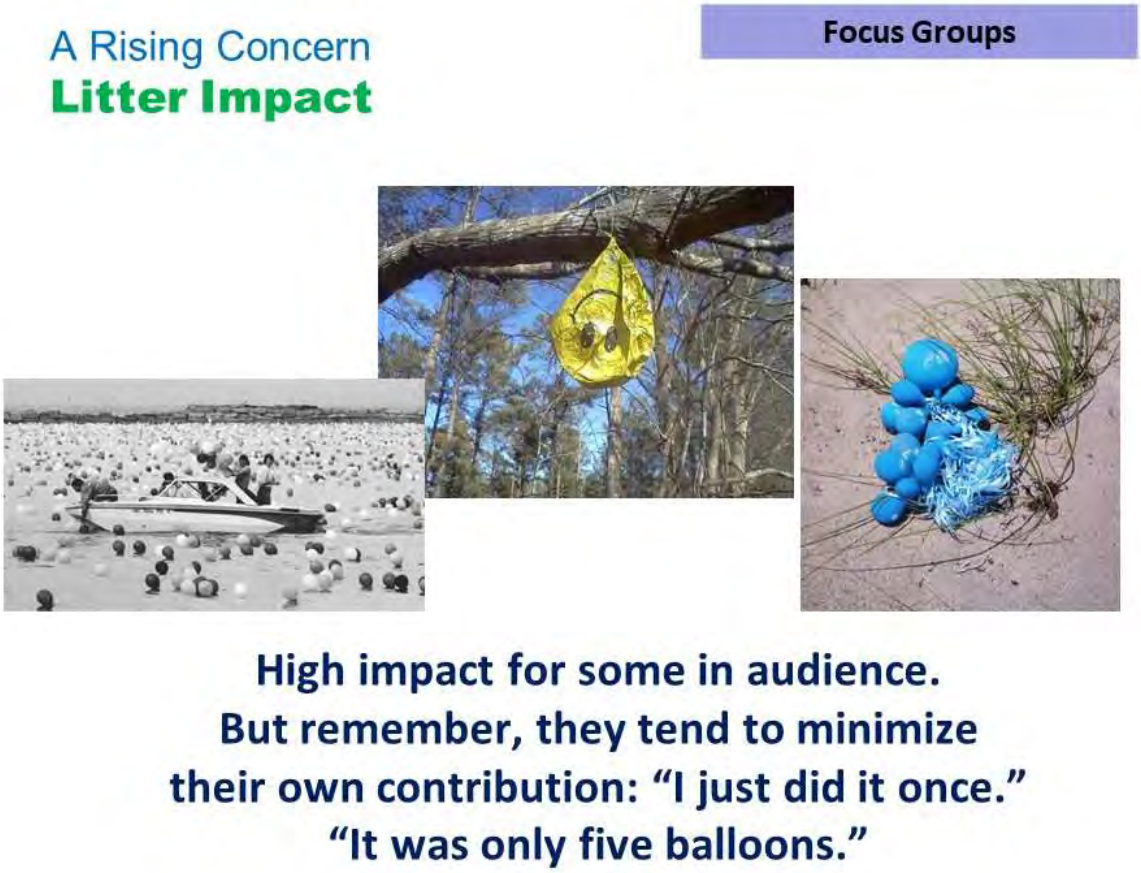
<u>Category 1: Wildlife impact</u>

A variety of images were tested and discussed. These featured marine life and birds that were entangled or perhaps had consumed balloon parts. It emerged that some focus group participants were strongly moved by wildlife impacts, while others were virtually unmoved. For those who were impacted, the emotional power in this messaging was strong. For most participants, though, it became clear that particular species were more motivating than others, depending on regional affinities or personal preferences. Sea turtles, for example, appeared somewhat less motivating upstream in Richmond than in Virginia Beach. Attention must be paid to species selection in imagery, both making an effort to localize the impact, and showing a variety of species impacted.

Mixed impact on audience.
Some strongly moved. Others not.
Species affinities come into play.

Category 2: Litter Impact

Showing real images of balloons as litter in natural settings can make an impact on people. In particular, in the series pictured below, the dramatic image on the left, which stemmed from a massive balloon release in Cleveland in the 1980s, raised curiosity and concern. But as has been observed, many people are quick to rationalize, and images that appear to be exaggerated lose their impact as people consider their own contribution – one balloon perhaps, or a single release by their wedding party – to be relatively benign.



Category 3: Electricity Outages

Understanding that errant balloons can damage or interrupt the transmission of power was an unexpected message for focus group participants, who imagined mostly environmental impacts from balloon releases. Perhaps as a result of that, the specter of power interruptions proved to be a surprisingly potent message. The impact was heightened by real factoids about the incidence of power interruptions, making this a real, not a theoretical discussion. In part, this imagery and messaging had potency because participants could imagine an impact on *them*, not just on a distant animal or beach.

Category 4: The Law

To a person, those interviewed did not know about a Virginia law prohibiting release of 50 or more balloons in a single event. For well-meaning, law-abiding citizens of the Commonwealth, this information was an eye-opener. We found that it was particularly impactful in the focus group of school principals, who said they would not want their school connected with an activity that was prohibited by law. One can extrapolate that reaction to event organizers in many other venues and anticipate how impactful this message could be across Virginia.

A Rising Concern

Focus Groups

Self-Restraint: Obey the Law

Courtesy of GospelGrabBag.com

It is illegal to release 50+ balloons in Virginia.
Just knowing that deters many law-abiding citizens.

In the second round of focus groups in Virginia Beach and Roanoke, this exploration was narrowed and refined to home in on themes and images that would truly impact the target audiences. A detailed analysis of focus group reactions was undertaken by Clean Virginia Waterways and is included as an appendix to this report. As a summary of their findings, we can point to several observations.

Focus group participants in Virginia Beach and Roanoke were asked to score “How much this image or idea makes me pause and think about the impact of releasing balloons” on a scale of 1 to 5 where “5” means “very much” and “1” means “not at all.” A total of eleven images and messages were tested in this way. Only four of them achieved an average score above “4” on the scale, falling into two categories.

Most impactful were images of wildlife impact. The most impactful images and their scores are shown here. The full range of scores and comments can be read in the appendix.

Highest scoring: 4.31

E

High-scoring: 4.29

H

High scoring: 4.09

J

Cartoon images of animals did not score as high. Participants had a strong preference for realistic images that could help them imagine the distress felt by the animals. Scoring much lower were images of balloon litter without animals present or with only humans encountering balloon litter.

Also scoring highly was this image of balloons caught in power lines, which brought to mind the personal impact of unintended consequences.

High scoring: 4.18

Implications and Recommendations Stemming from This Research

As a result of this work, it appears that three ingredients must be present to lay the foundation for a successful campaign:

1. This activity is still a social norm in Virginia. Relatively few people in this research said they were opposed to balloon releases, and others demonstrated that they would have trouble overcoming the social pressure or emotional gratification that is part of balloon release events. Over time, this campaign needs to focus on shifting the social norm.

2. To some extent, both planners and participants must be confronted with the negative impacts of balloon releases. These are threefold: wildlife impacts (with attention to varying the species and showing authentic impacts), the unintended consequence of power outages, and for event organizers, just knowing that mass releases are against the law in Virginia.

3. Finally and importantly, the emotional gratification drawn from a balloon release event must be replaced with alternative practices that offer their own, different gratification and meaning for participants. While the colorful release of balloons is a visual spectacle, other forms of gratification can be found for participants. The campaign team should continue to explore and promote compelling alternatives as part of its outreach effort.

Exploration of Alternatives

As a campaign grounded in the practice of Community Based Social Marketing, this effort will need to concentrate on creating a new norm. From the research, we know that balloon releases are emotionally compelling. Therefore, a focus on both the negative consequences of balloon releases, and the positive gratification offered by alternatives, will be needed. Given the many venues where balloon releases take place and the niche audiences participating, it seems most practical in the immediate term to focus on mid-stream event planners and hosts, and the people who influence them.

An array of social marketing tools are available to help with this task. One can imagine well-timed interventions delivered in-person at bridal expos or school administrator meetings, or delivered electronically to event decision-makers. On a limited budget, this may be effectively backed by evocative social media content aimed at target audiences with the intent to go viral. Many possibilities present themselves.

Thank you to the project team for the opportunity to undertake this interesting formative research. We look forward to continuing to be a resource to this important effort as it moves forward through pilot testing and beyond.

OpinionWorks
Annapolis, Maryland
September 2017

Appendix D - a

Balloon CBSM Research Tool: Additional Summary Details of Mass and Social Media Analysis

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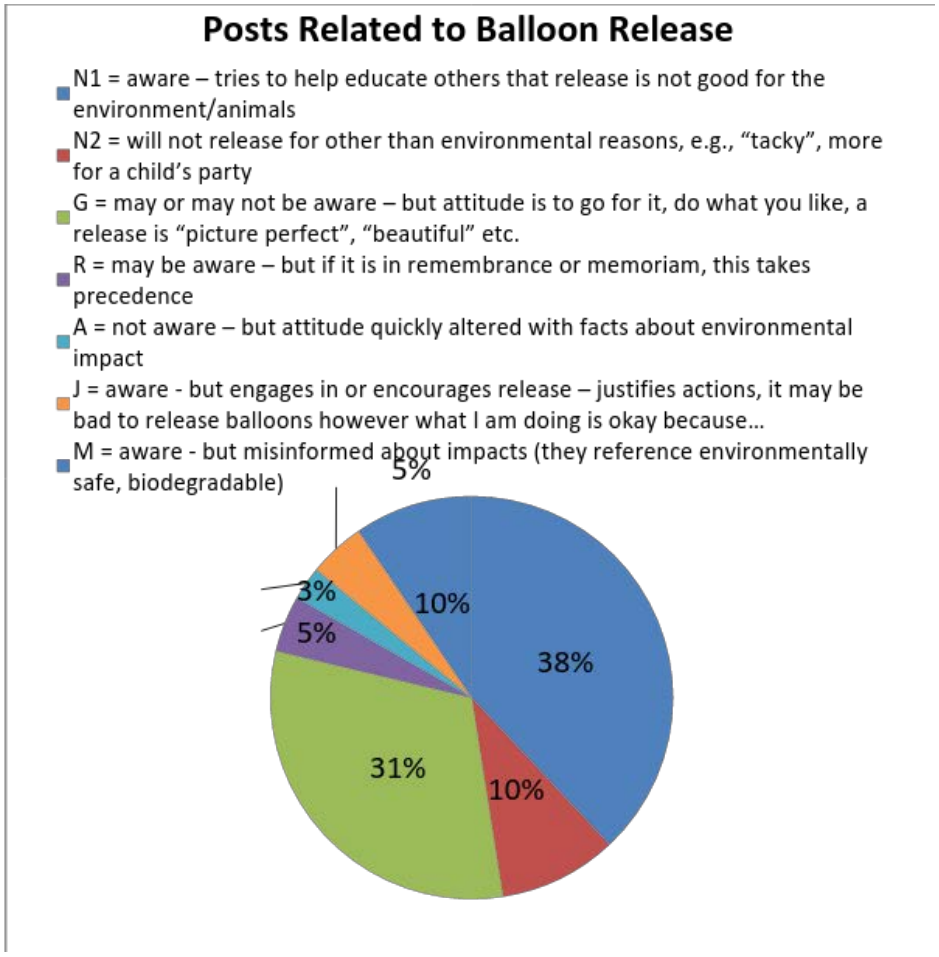
Posts on the wedding blog and Pinterest where the subject of the inquiry was balloon release and alternatives, and remembering loved ones at the ceremony, were reviewed. 215 of the 457 posts were specifically referenced balloon release.



38% (#84 – N1) of the balloon release related posts - brides understood that "bio-degradable" did not mean "environmentally-friendly":

- *I have to agree with Barbara, latex balloons are considered bio-degradable but are still not eco-friendly. Also tying a string to balloons is very dangerous to the animals that get caught and strangled in them. I live in a beach community where an endangered sea turtle resides (loggerhead) and any kind of balloon or string is strictly prohibited here.*
- *The biodegradable balloons still take a considerable amount of time to break down, plenty of time for a bird to think its food and eat it up. Not to mention that helium is actually a limited (non-renewable) resource, and besides filling balloons, it's actually required for really useful things like medical imaging.*

31% (#70 - G) of the balloon release related posts - brides have/or planned to release balloons:

- *Balloons released after ceremony with bride and groom kissing outside church would make a beautiful, fun photo.*
- *Another great party - best ideas: serve food from iron skillets, release balloons with lights inside for "lanterns"*
- *Idea for vow renewal: Burn a note that says "here's to the past", and release a note that says "here's to the future" tied to a balloon. Secure it in a ziplock bag and ask who ever found it to mail it back to us so we know how far it went :)*

9% (#21 – N2) of the balloon release related posts - brides planned not to release balloons or discouraged release due to rules and laws, helium shortage or other reasons:

- *Please also think about if anyone has allergies. If this were going on at a wedding I was at, I would stop breathing and probably be hospitalized (or dead) as I have a severe latex allergy that affects my breathing.*
- *Even if you don't find any ordinances regarding releasing balloons, you venue may not like it. You could lose your deposit.*
- *I don't really like the balloons – wildlife animals or not, I just don't like the way it looks.*
- *There's a worldwide helium shortage so I'm not even sure a local place would be able to fill that many for you.*
- *Looks more like a Child's birthday party than an elegant wedding....*

9% (#21 - M) of the balloon release related posts – brides mentioned that "environmentally safe or friendly" balloons are available and therefore okay to release:

- *Well. They do make Eco friendly, biodegradable balloons that shatter into tiny pieces at a certain altitude when filled with helium. When the little pieces (made from natural ingredients) reach the ground they degrade faster than an oak leaf on the ground.*
- *While balloon releases are pretty. most balloons are considered litter and people don't care for them anymore. But, I hear there are eco-friendly, biodegradable balloons, in which case it would be great!*
- *I once had a balloon release in a wedding as a memorial gesture. It can be lovely, but does depend upon the type of balloon as to whether it's advisable or not. Make sure you get the environmentally friendlier ones. Some are just dreadful on the environment.*

5% (#11 – R) of the balloon release related posts - brides have/or planned to release balloons in memorial to family or friends:

- *We did a balloon release immediately after our ceremony in honor of my mother who passed away a few years ago... sending the celebration up to the heavens. Nobody thought it was tacky. Even people that never knew my mother were touched by the gesture and tearing up. It was beautiful. I can see why some of you ladies might think that balloons at a wedding might be tacky, but I know that they can be incorporated in a beautiful way.*

5% (#10 - J) of the balloon release related posts - brides appeared to understand the impacts of balloon litter but tried to justify their decision to release:

- *Anyway just because I'm doing a balloon release doesn't mean I don't care. I have been to my council and asked what I am allowed to do and am following the guidelines i have been given. You guys have your opinion and I have mine which I am entitled to. I trust people to make their*

own decisions and consider the implications rationally not emotionally. I personally don't see 3 balloons causing much of an issue.

- *The littering is a downfall but I'm debating if 10 balloons is something to worry about.*
- *We would only be releasing 3 or 4 balloons*
- *We are having 3 balloons to release in memory of my 2 grandads and my nan. We are not using string which 'can' get caught on animals as per the guidelines we have been given. FYI balloons only reach a couple of hundred feet before they pop and fall. biodegradable balloons break down into tiny fragments. There are no rivers lakes water etc near my venue and i have never seen a turtle on dry land in the UK. I'm interested to know however if people plan on using confetti or rice which are bad for birds. Also whoever said butterflies- this is much crueler as many of the butterflies die before being released.*
- *I don't think your 10 balloons will cause global warming I think you're good.*
- *10 is nothing to worry about!*

Some brides responded that these attempts to justify were misguided:

- *Ten balloons may not cause global warming, but the strings, and the pieces of balloons, can really harm animals. While it might be pretty, it just kind of seems thoughtless when you know this can happen and you might still consider it. Not to mention, if every bride said "Oh it's just 10 it won't harm anything" multiply that by ten brides that say that, you have 100 balloons floating around, and THAT does add up.*
- *A popped balloon looks like food to birds and other wildlife. They eat it, and it can't be digested so it blocks their digestive track, causing them to starve to death. It only takes ONE balloon.*

3% (#6 – A) of the balloon release related posts - brides stated that prior to reading the blogs, they had no knowledge of the environmental impacts of balloons and were thankful to learn from the brides who did:

- *I've never given much thought to the environmental aspects before until today. Everybody around here does balloon releases (i.e. schools, churches, nonprofit organizations) it's something that is very common around this rural area.*
- *I changed my mind thanks to Andrea R. who was NICE and offered an alternative suggestion of a bubble machine, no litter, no wildlife being injured, ALL GOOD!!! Plus with the TONS of kids being there it will be a HUGE hit!*
- *Oh my! I have never thought of that! Thanks for posting ladies! Yea I'm sure the balloon thing isn't too good: /*
- *Awe, I love the idea.... and then I saw everybody's responses :(Anybody have any alternative ideas?*

Other Observations:

- Helium Balloons containing light sticks and battery-powered candles seem to be a trend.
- Chinese lanterns were suggested repeatedly as an alternative to balloons.
- Although some brides suggested that balloons were juvenile and would be tacky used at a wedding, there was a prevalent attitude that balloons are a picture perfect and beautiful way to celebrate marriage.
- The Balloon Council website was mentioned more than once but so was the CVW website!
- On Pinterest many photos posted show balloons released with attachments.

- Clearly venues have a big impact on what activities take place, and some may be – perhaps inadvertently – encouraging balloon releases when they restrict all or most other exit activities, as throwing confetti and birdseed, due to clean-up, safety issues, and environmental concerns, like littering.
    - *Balloons are a great option for venues that won't allow rice or flower petals.*
    - *I am still going to do a balloon release regardless and my venue has agreed it is fine so long as I use biodegradable balloons and no string. Just check with your venue. FYI my venue is in the countryside and they were perfectly happy for me to do this so long as proper precautions were taken.*
    - *Just b/c a venue allows something, that doesn't mean it's legal. Most places don't bother to know or follow the law.*
    - *Whatever you decide on though, check that your venue allows it! Some have restrictions!*
    - *Every idea sounded dangerous for our venue (slipping, tripping, getting poked in the eye). A balloon release sounds beautiful!*
    - *My church is not letting us use anything that can harm the environment, or fall to the floor.*
- **A vendor called "Celebrations" posted on almost every blog to assure brides that balloon releases, if done "properly," would not cause any environmental harm.**
    - *I would first like to address the comment Sunsand made about balloons and the environment. Recently, during a U.S. Coastal Cleanup, balloons/balloon pieces accounted for less than 0.7% of the total debris collected. Latex balloons will decompose, forming a natural soil nutrient at the same rate as that of an oak leaf. Latex balloons are made from the sap of the rubber tree, a higher demand for latex balloons will actually help preserve the rainforests. Go to http://www.savetheballoons.com/myths-facts.html for more information. There are certain rules and laws that you need to follow for a balloon release and they vary by state and even city. Hiring a balloon professional will help eliminate any potential problems. One way to make a balloon release more special is to have the bride and groom each release a larger balloon in a different color. Your guest will stand and watch them drift out of site and they will know which ones were yours. It's truly beautiful!*

Regretfully, Celebrations achieved its goal with one bride responding:

- *Celebrations that is great information. Thanks for sharing! Might just have to look into a balloon release now that I know it's safe because I do think it looks amazing.*

These two posts clearly showed that the brides had some knowledge of how far a balloon can travel:

- *Such a cute idea! Guests write a message on a postcard (pre-stamped and preaddressed) to the couple and it is tied to a balloon filled with helium. At some point in the reception, all the guests go outside to release the balloons. The idea is that whomever finds the postcard after the balloon is grounded will stick it in a mailbox to return to the newlywed couple. When you make the postcard, be sure to include an explanation and instructions to the person who finds it. This keeps the good thoughts coming for weeks or possibly even months after the wedding is over. Create a special scrapbook of the postcards as they arrive in the mail.*
- *Do something special with just your bridal party. Give your best friends some TLC with a special "something" just for you and them. We love the idea of a balloon release. How cute that someone many moons away will stumble upon a personalized "I Do" balloon?!*

The tone and language of posts illustrated the very strong emotions connected to wedding planning – "I will do what I want on my wedding day – it is my day", or "You should do what you want on your wedding day":

- *I posted on here about doing a balloon release and got bombarded with replies about how bad it is for the environment. I am still going to do a balloon release regardless and my venue has agreed it is fine so long as I use biodegradable balloons and no string. Just check with your venue. FYI my venue is in the countryside and they were perfectly happy for me to do this so long as proper precautions were taken. Do what you want to do. The animals will be fine. I'm sure all these people telling you not to still drive cars and use hairspray or other chemical dangerous to animals.*
- *these damn animals ruin everything...1st we can't throw rice cuz it chokes the birds...now we can't release balloons cause dogs will choke...LOL I'm having balloons at my reception. They will be dangling above the dance floor. We will probably release them after the countdown for a photo opp*
- *Just do what you originally wanted to do...Unless you are really worried about the airport thing. But don't let other people's opinion change what you want to do.*

And, equally strong responses these posts – "why if you are being told that it is environmentally damaging would you be so selfish":

- Do what you want, it's your big day!! *Really? Doing damage to the environment is fine, so long as it's YOUR BIG DAY?! Just because it's your wedding day doesn't give you a right to do something harmful to wildlife. People from zoos and wildlife rehabilitation centers have asked that this not be done because they've seen firsthand the damage that this can do to animals. But screw that, it's YOUR BIG DAY! *sigh**
- *omg balloons on the beach, how many animals had to die for those photos?!*
- *Not the same thing. Cars and hairsprays have pretty extensive environmental policies, and no animal is going to choke on your hairspray. Your attitude of 'it's my day! screw the birds they'll be fine' is incredibly selfish and says a lot about you. You can keep telling yourself that animals will be fine, but it's 100% false. This is one of those things that is so simple to prevent harm to the environment. And just because it says 'biodegradable' does not make it okay. 6 months it takes for a balloon to biodegrade does not mean you aren't still littering. I can throw my Wendy's bag from lunch on the side of the highway and is it okay because it's biodegradable? Nope. Is it okay for smokers to toss cigarettes all over because it will biodegrade? Nope. For the OP, sparklers, ribbon wands, bells are also stunning and make great pictures.*
- *Why anyone would want litter, and animals choked to death, to symbolize their marriage is beyond me.*
- *It doesn't matter that they biodegrade if animals choke to death on them 20 minutes after they land. My brother is a ranger at park in Florida and has literally pulled balloon pieces out of animal's throats. Your post doesn't address the issue in the slightest – we all know they biodegrade eventually – that's not the problem. Hawks see them in the sky and swoop in to grab them while they're still floating and choke to death on them. Romantic, right? 3 balloons very well could mean 3 dead animals. I just don't understand – with the gazillions*

of ecofriendly options out there – why it would possibly be worth hurting a living thing for a wedding prop.

Repeated Language – words and phrases – Against Release

- synchronized littering
- what goes up, must come down

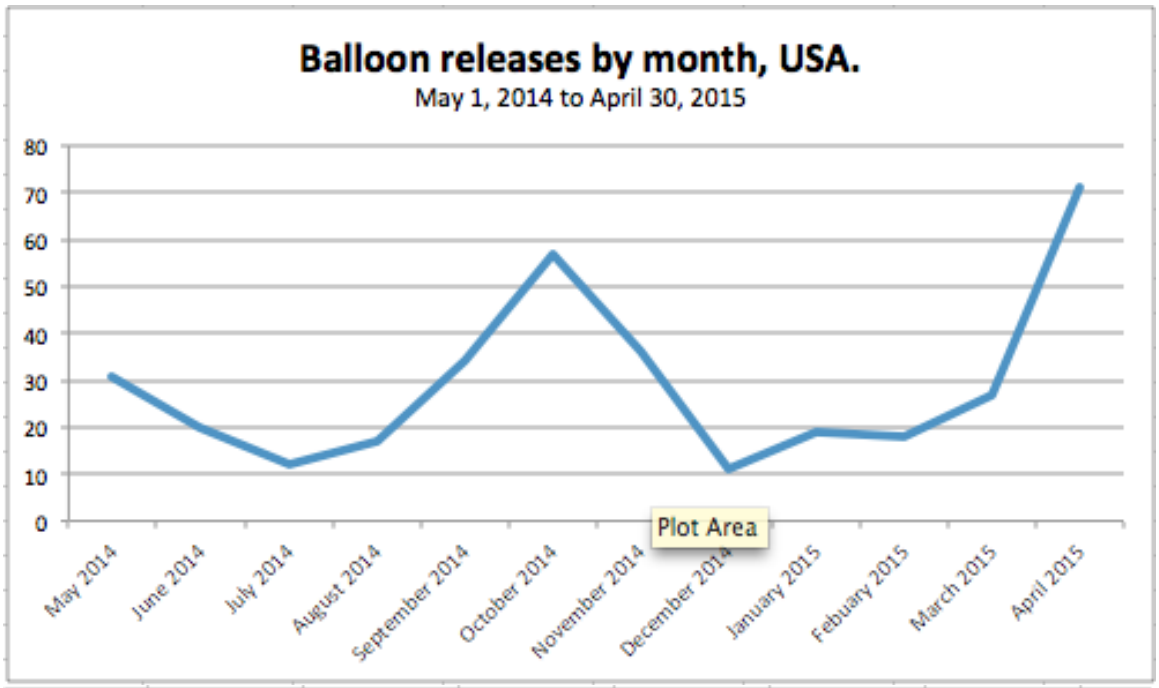
Repeated Language – words and phrases – In Support of Release

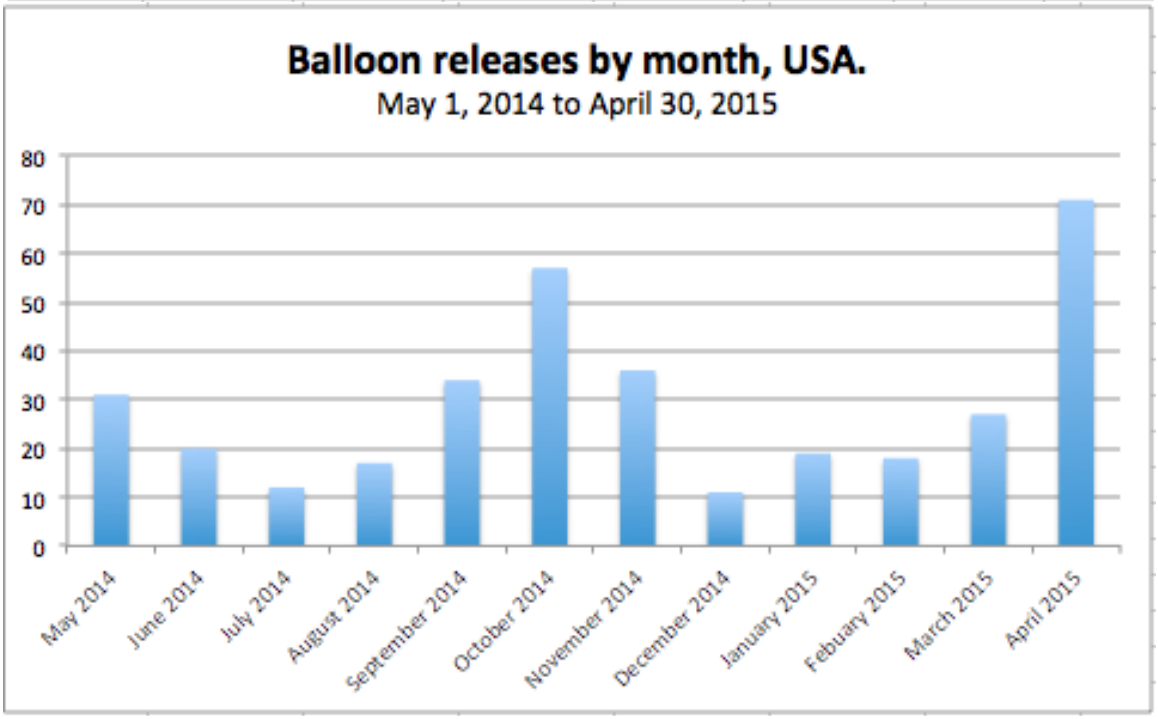
- Safe for the environment, biodegradable, eco-friendly
- Safe if properly done
- Great for a picture or picture perfect
- Beautiful or gorgeous effect
- Celebration to the heavens

Balloon Alternatives Suggested/Mentioned

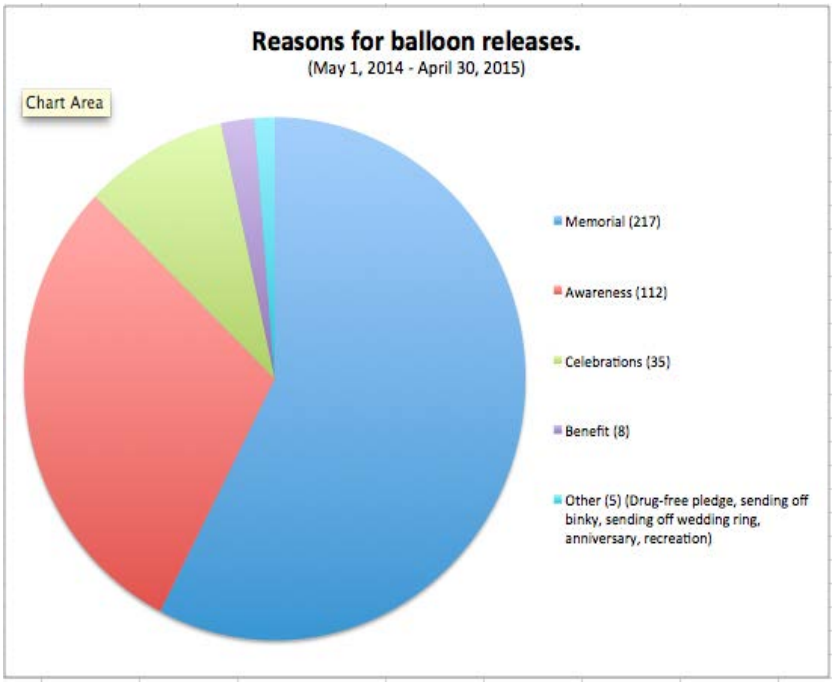
- kazoos
- bubbles
- bells
- butterflies
- flower petals
- handkerchiefs in wedding colors
- little signs that say “yay!” and stuff
- ribbon wands
- sparklers
- tinsel wands
- glow sticks
- bouquet

Appendix D - b
Balloon CBSM Research: Additional Summary Details of News Media Analysis

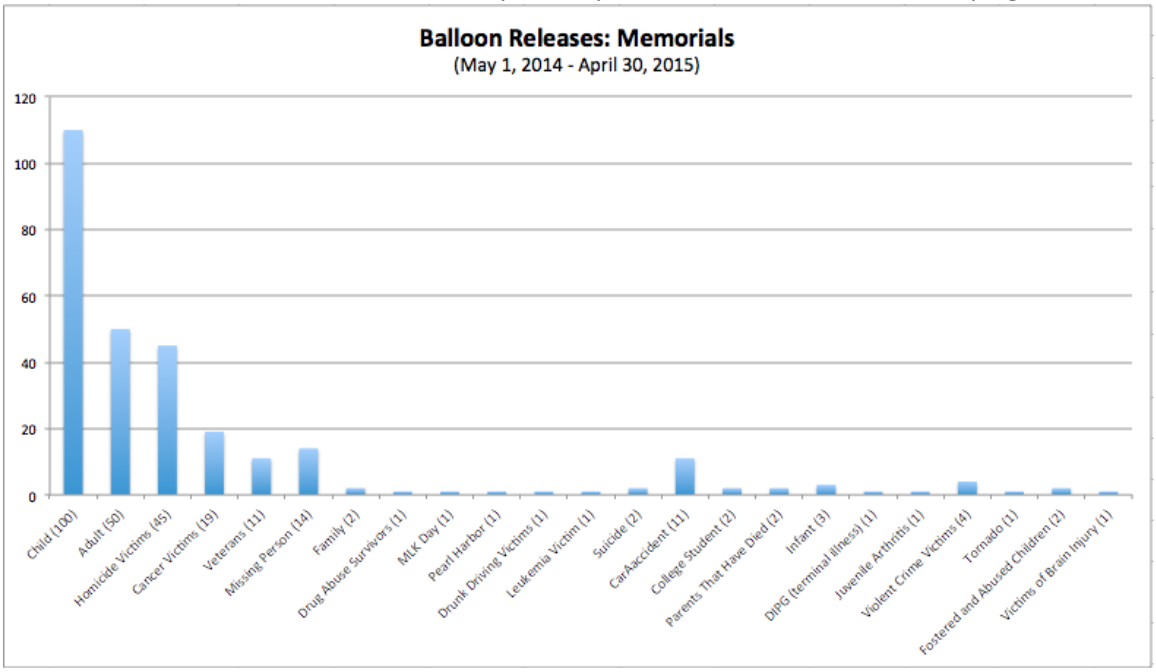


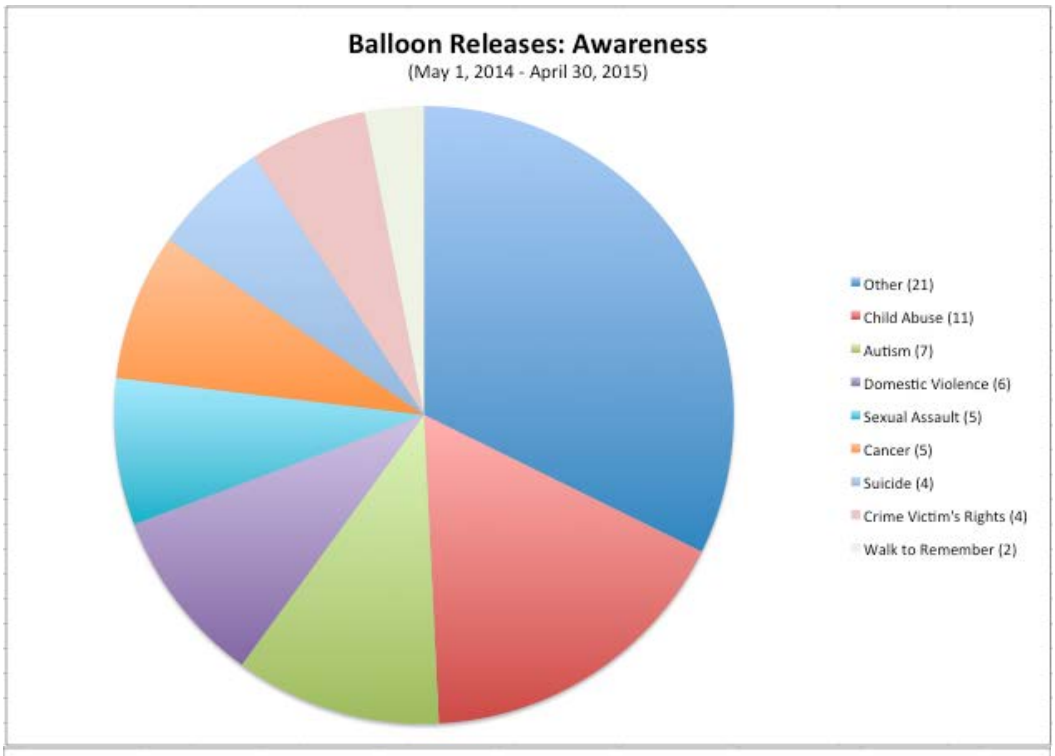


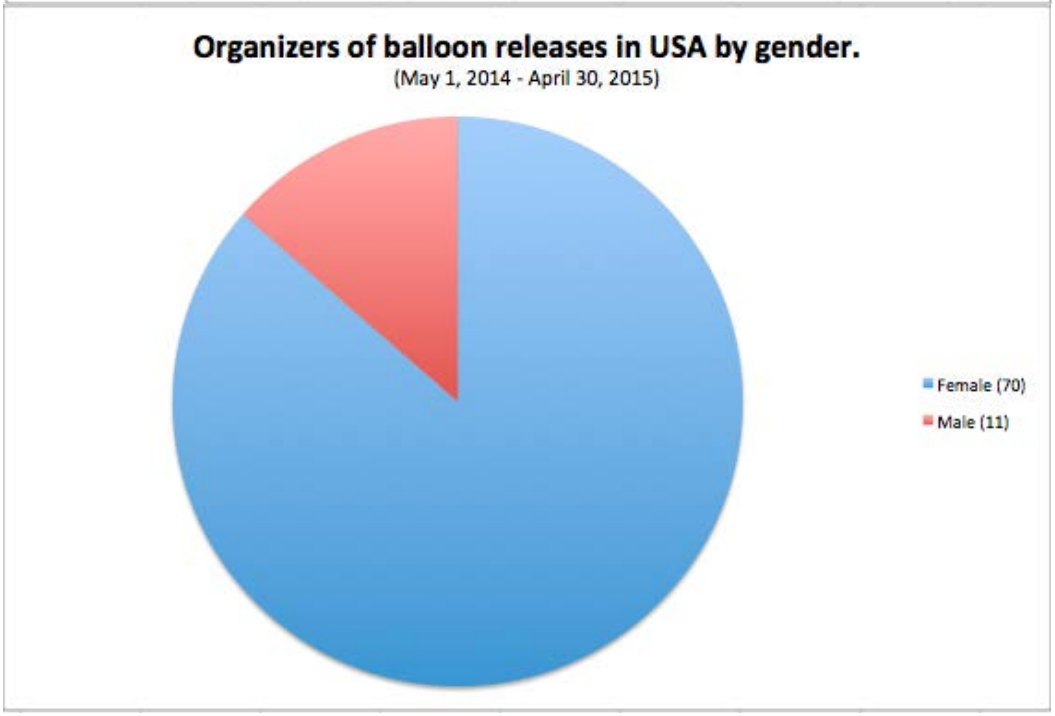
April was the #1 balloon release month with 71 releases, followed by October (57 releases), November (36 releases) and September (34 releases).



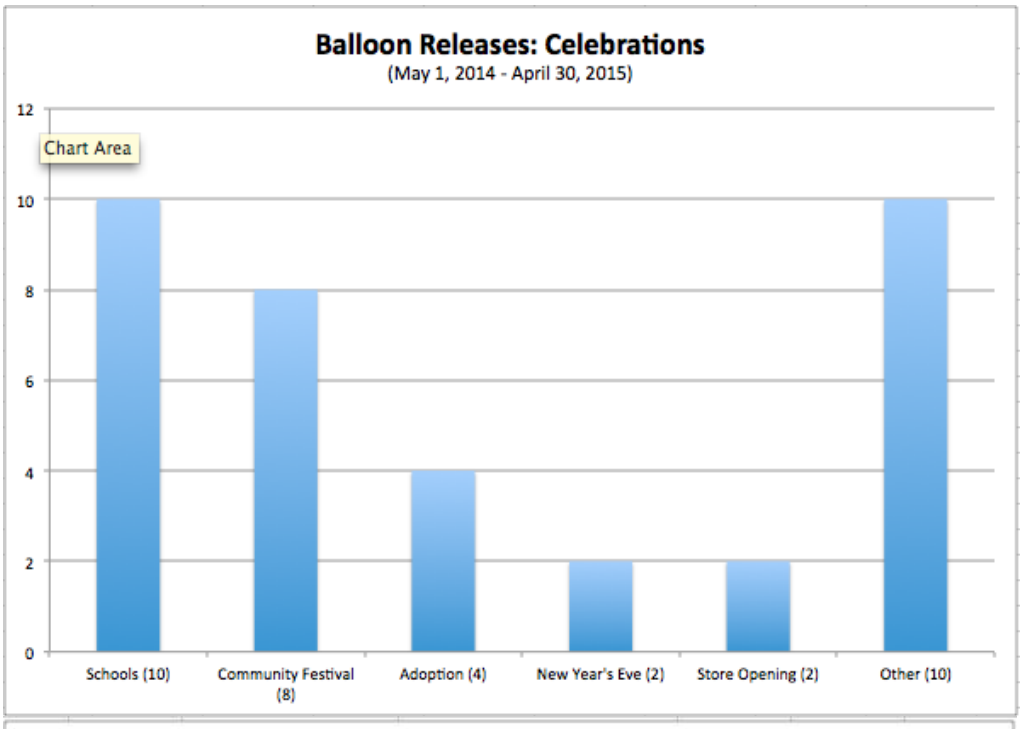
The memorials were mainly planned by small groups, families, co-workers, etc. The awareness-related balloon releases were done, for the most part, as part of national awareness campaigns.

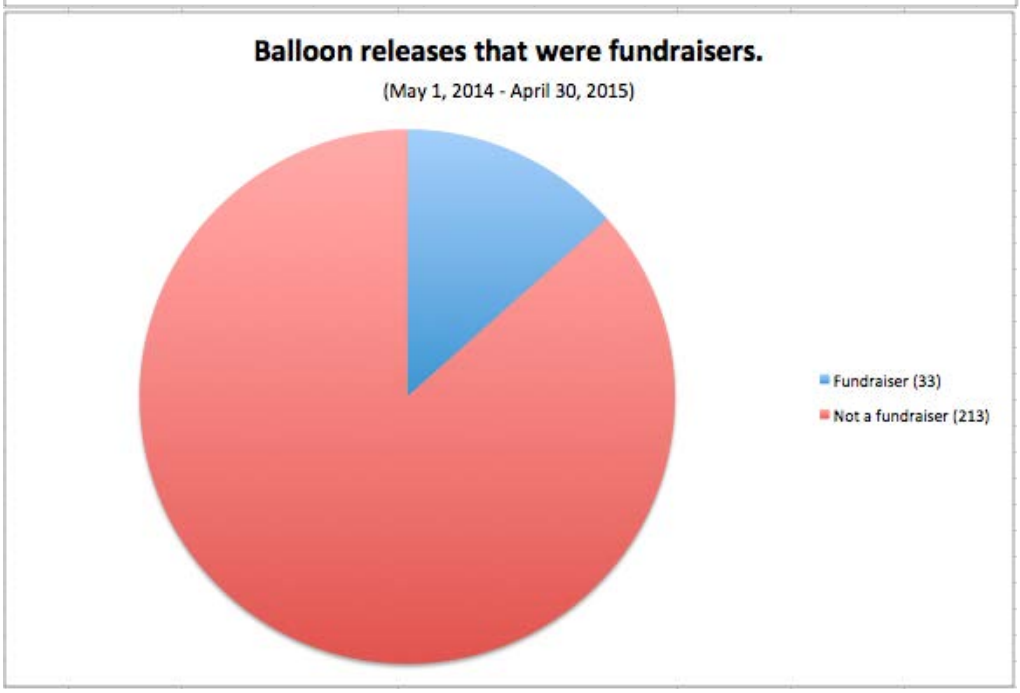


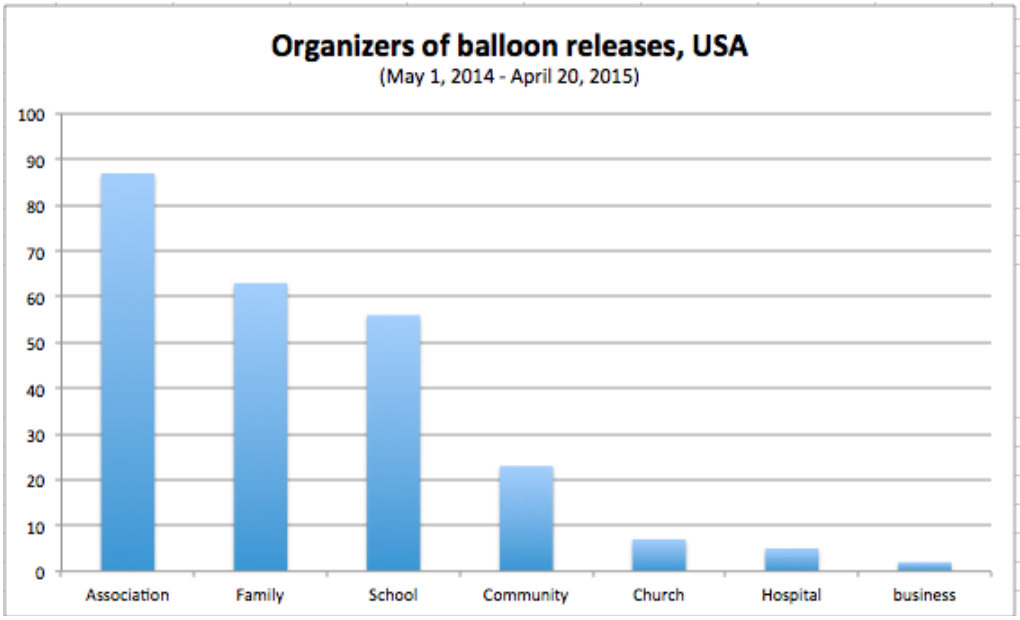




86% of the people who organized balloon releases were women (when we could determine the gender of the organizer). Many times, press articles just said the releases were planned by friends, family, or co-workers.


Balloon Releases: Celebrations
(May 1, 2014 - April 30, 2015)
Chart Area
12
10
8
6
4
2
0
Schools (10)
Community Festival (8)
Adoption (4)
New Year's Eve (2)
Store Opening (2)
Other (10)


Balloon releases that were fundraisers.
(May 1, 2014 - April 30, 2015)
Fundraiser (33)
Not a fundraiser (213)



About these charts: the data represented in these charts were gathered from Google Alerts that were sent daily to Clean Virginia Waterways. CVW staff & interns coded all balloon releases that were reported by the media in the USA. For information, contact Katie Register, Clean Virginia Waterways 434-395-2602 or registerkm@longwood.edu

Appendix D - c
Balloon CBSM Research: Public Survey Tool

Longwood University and Partners
Formative Research Questions - Partial Results
N=495 General Public as of 5/7/15 (conducted online)

OPINIONWORKS
PUBLIC SPIRITED RESEARCH

General Public

Introduction

Thank you for taking part in this study for Longwood University about the use and release of helium balloons. This survey is brief – about 5 minutes – and it is voluntary and confidential. You will not be asked for your name or other personal identifying information, and your responses will not be connected back to you in any way.

Survey Questions

1A. Do you live inside or outside Virginia? *(Required)*

Live in Virginia 97%
Live outside Virginia3%

1. In the last 10 years or so have you taken part in an event or ceremony where balloons were released, for example at a wedding, at school, at a memorial service, to call attention to a cause, or something like that? *(Required)*

Yes *(Skip to Q3.)* 31%
No *(Ask Q2, then skip to Q12.)* 63%
Can't remember *(Skip to Q12.)* 6%

(If no):
1. Why haven't you taken part in a balloon release event or ceremony?

I have not been invited or have never been present to take part in one 84%
I have been invited and would have taken part, but was not available 5%
I have been invited to take part but did not want to 12%
(Skip to Q12.)

(If yes in Q1):
1. About how many times in the last 10 years have you taken part in an event or ceremony where balloons were released? *(Number box)*

1 40%
2 28%
3 9%
4 4%

5 12%
6+ 6%
Median 2 times

1. During what months of the year have you taken part in a balloon release? Mark any that apply.

Spring (March, April, May) 59%
Summer (June, July, August)43%
Fall (September, October, November) 19%
Winter (December, January, February) 13%
Can't remember 9%

1. The most recent time you took part in a balloon release, what was the cause or reason for the balloon release?

Funeral or memorial service 50%
To raise awareness or funds for an issue or cause 12%
Wedding 10%
Sporting event 7%
Religious worship 2%
Some other reason 13%
Can't remember 6%

5A. If there is a "cause," "issue," or "other reason" from above, please specify here:

100th Day of School
80th birthday
80th Birthday celebration
A memorial of a student.
a woman who used to go to my college was killed a year ago. This was a fundraiser for a scholarship in her name
accidental release
American cancer society
Autism Awareness
baby
camp comfort zone
Cancer
Cancer
cancer - memorial service
celebration
children send messages to recently deceased grandparents at Christmas time
childhood cancer
counseling
every year on the birthday of my wife's niece who was killed by a drunk driver when she was 18
Family Reunion - in honor of lost family members
flea market

Graduation
It had to do with a children's book where a character went up in a balloon and we did it at Xmas time when giving the book as a gift.
Megsmiles memorial
Memorial scholarship fund
motivation for students before SOL testing
Relay for Life
Relay for Life
Relay for Life
school celebration
School Reunion where the balloons were released but I didn't take part in it.
send birthday balloon to heaven, send baby shower balloon to heaven

1. That most recent time, where did the balloon release take place?

School 28%
Church or other house of worship 17%
Park 16%
Community center 9%
Hospital 0%
Some other place (Text box) 24%
Can’t remember 6%

A barn (now a wedding venue)
At a cemetery
at the scene of an accident
Ballpark
beach
beach
burial grounds
camp
Cemetery
cemetery
cemetery
cemetery
cemetery
cemetery
Community Event
Family house
farm
farm
Grave site
Grave site
Grief camp for children
home

home
Home
home
home, fire station
it always takes place at home and it is one single balloon
Kroger Grocery Store
parking lot
Restaurant
restaurant
Shoulders Hill Road Cemetery, Suffolk VA
Stadium
stadium
The outside of the house where the recipient of the book lived

1. How would you describe the area where the balloons were released? Mark any that apply.

Rural area 38%
Suburban area 27%
Small town 23%
Urban area 14%
Within a few miles of the ocean or Chesapeake Bay 1%

1. Was the balloon release event in Virginia or outside Virginia?

In Virginia 86%
Outside Virginia 14%

1. As far as you know, was this part of an annual or a one-time event?

Annual 14%
One-time 70%
Don't know 16%

1. What were the feelings that you experienced as the balloons were being released? (Text box)

A celebratory joy
A feeling of serenity
A sense of togetherness
awe, curiosity
awesome!
Beautiful tribute to a life lost
calm, happy
Celebrating a remembrance.
Comfort. My 5 year old son died one year ago and we had a balloon release at his funeral and at a 5k

held in his honor. (where more than 5 balloons were released) We have also sent him a balloon on holidays, etc. but these have been a single or at times, 5, for his age. I feel like I am sending them to him and it gives us peace.
concern for what damage they may cause
Didn't really think about it
do not recall
Excitement
excitement
Faculty and students were excited. The autism speech and the release of the balloons resulted in a very thought provoking moment. Made you really think about what had been said as the balloons drifted off. The silence and balloons drifting made you think of the students in the school who were affected with this disability. The autistic students were very excited to release the balloons.
Freedom
Fun
fun
gone but not forgotten
good
Grief, had just lost a very important person in my life.
Guilt because I knew it was wrong but I didn't want to offend the individuals who had just lost their child.
happiness
Happiness
Happiness, joy, excitement
happiness, sadness
Happy
happy
Happy thoughts of the person who had died filled my mind.
hope
Hope, peace
hopeful
I did not directly participate as I do not believe in damaging the environment. However, I was very uncomfortable and wished there were a way to have the family choose a better option.
I did not support the release, but it was done by an outside agency.
I do not like releasing balloons because they end up as litter. i don’t know how long it takes them to break down. so I was not happy
I don't agree with it being done.
I enjoyed it. I liked watching the balloon fly up into the sky in remembrance of a close friend.
I hoped that the balloons (that contained messages) we were sending up got to our loved ones.
I hoped that this activity would be helpful to those who were grieving.
I wanted to stop them
I was against it all along because I am part of a turtle rescue team. I COULD NOT convince my family any different so I went along because it was my brother's memorial
I was concerned about the effect the release would have on wildlife.
i was excited. The kids were excited.
I wondered where they would land.

I, personally, opt not to participate in balloon releases due to the negative impact on animals and the environment. I have been at weddings and school functions where they have been released and I always cringe at the thought.
Indifferent
It is very pretty and seems to help release things inside of you. Also we always send up prayers. I have got a balloon land in my front yard from Texas for a death of a family member and actually we send messages back and forth some.
It was a beautiful moment. We felt connected to the woman who has left us.
It was a celebration so happy.
It was a nice remembrance
It was beautiful - It was about 5 balloons.
It was fun at first but then not so fun when the balloon got stuck up high on a tree branch...It stayed stuck up there for months and finally got blown away during a strong wind storm
It was pretty, but I know the dangers of balloons on sea life and birds. Thank goodness the balloons did not have ribbon.
it was wonderful seeing them fly up, but i did wonder where they would go
It's a sense of peace
Joy
joy
Joy
Joy and emotional
joy, happiness, optimistic.
looked cool
Looked nice
Love, pain, acceptance, hope
Loved it! Felt like I was sending a message to heaven
nice feeling
No problems
No special feelings
none
not a fan
Not good for the environment
nothing
peace
Peace
Peace
peace
Peaceful
Poor animals who get a hold of the balloons when they come down deflated.
positive
Pretty sight
Reflective since it was a memorial but mixed feelings that balloons were released as part of the ceremony.
release of sadness
Relief/Closure

Remembrance. It was in honor of murder victims
sad
sad
Sad
Sad
Sadness
sadness
Sadness at remembering the loss of a teenager
Sadness at the loss of four year boy. The son of a very close friend.
Sadness because my grandmother passed away.
Sadness for the loss of the child
Sadness--related to the cause of the event--cancer
sentimental
Since it was a memorial event I understood, but I also know it's bad
Some concern about where they would end up
spiritual
This is a danger to animals.
touching! It was a great tribute to a little girl who had passed away suddenly. Her classmates sent them to her
was emotional
We released only one per classroom instead of one per child as we were asked to do. We did this in memory of a custodian who passed away. This was 30 balloons.
What a waste of terrible plastic! Definitely thought it was a bad idea
When I lift my eyes to see the balloons going up to the sky, I felt a peaceful emotion of hope in my sorrow as a widow. Through that wonderful experience, I remembered that my help to pass that painful moment, will come from heaven. Balloons means a lot to me.
where were they going??
While I love the beauty of it, I am concerned about what happens to all of the balloon parts when they float away and fall to the ground
Wonderful!
Worried about the environment, impact on marine life since we are very close to the Bay
YAY!!

1. As the balloons were being released, did you think about where the balloons would end up after they went out of view?

No 22%
Yes, a little 48%
Yes, a lot 30%

(All):

1. Which of these best describes what happens to balloons when they are released into the air?

Fall to the ground or water and do not break down 75%
Disintegrate or break into very small bits in the atmosphere 7%

Fall to the ground or water and break down naturally 6%
Float out into space 5%
Something else (Text box) 7%

Balloons have a detrimental impact on wildlife; balloons land on your beaches and in the seas. This causes animals to eat and get caught up in the balloons and tangled in the string, which often results in an animal's death.
cause havoc for planes, bird and such
Could cause injury to birds and other wildlife.
deliver messages to heaven
depends on the type of balloon and environmental conditions as to if it will break down
Do not break down AND harm and injure wildlife and pollute streams, rivers, etc.
don't know
Don't know
end up in the bellies of seagulls
Fall to the ground or water and break down very slowly...hundreds of years!
Get eaten by small animals.
have always heard they posed a pollution risk to animals, but have recently heard they do not
I believe it depends on the material the balloon is made of.
I don't know!
I don't know. I never thought about where they go
I have no idea!
I'm not really sure. I would think that they would bust at some point due to the pressure?
I'm not sure
It depends on the type of balloon. Latex balloons travel upward if unobstructed and freeze at a certain altitude. They do not return to earth intact. They may return in pieces. There are biodegradable balloons that should be used for air release.
Not really sure
our sea life and birds eat them and die
pollute the land or water
stuck on trees
The temperature inside the balloon decreases thereby decreasing the volume of the balloon which causes it to fall to the earth.
These can remain in the environment for such a long time, and they have great potential to harm wildlife that may ingest the balloon or become entangled in the ribbon that so often accompanies balloons.
They can stay stuck somewhere for a long period of time. They may not fall to the ground and they will not break down naturally...
They fall to the ground or into water sources. They may get eaten by local animal life which is not quite healthy for them.
What a leading question!!!! Clearly there is an agenda that you are trying to build data for.
What is the process?

1. If you are invited to take part in a balloon release in the future, or if you attend an event where one occurs, how likely are you to take part?

Very likely	13%
Somewhat likely	15%
Might or might not	27%
Somewhat unlikely	13%
Very unlikely	32%

1. Do you have any other comments you would like to make about balloon releases?

A balloon got caught in the power lines and caused a major power outage in Lake Ridge, VA last week. Pictures show it tangled in the lines. :(
Against all balloon releases
As a school leader I do what I can to discourage/prevent balloon releases.
bad for the environment and animals
Balloon release should be banned. No amount of balloons released is okay.
Balloon releases should be banned. I must find and pull at least a dozen of them out of the Chesapeake Bay each summer.
Balloons are very dangerous to birds and other wildlife, so I prefer not to take part in these types of release activities.
Balloons can only hurt the environment.
Balloons kill/maim/harm many animals including marine mammals and sea turtles.
BANG-- Balloons are Nasty Garbage
Educate people about what really happens to balloons--plastic or mylar. Helium is a whole other issue.
From what I understand, balloons pose a threat to wildlife on land and in the oceans and waterways. While I have nostalgia for the balloon release events of my childhood, I do not wish to contribute to the pollution of our environment, nor to the demise of fish, birds, and mammals.
Good for you for studying this. Hopefully, it will create awareness!
Haven't given it much thought but it's probably not good for the environment or ecologically responsible.
Helium is rare and we are running out! Save the helium!
I always think of how harmful it is to the environment. However, I also feel, as a society, we enable our citizen to view littering as a norm. We simply send people to clean up the mess. People do not view littering as harmful to the environment and hazardous to wildlife. That being said, over the past few years I feel people have gotten away from releasing balloons at weddings
I am a huge fan of sea turtles and I feel like balloons landing in the ocean are no different that plastic bags which can harm sea turtles.
I am absolutely not a fan. While the two events I've attended were planned without my knowledge, I would not plan an event with a balloon release.
I am not sure why I was sent this survey.
I am under the impression that the balloon release events are use more-so for closure of a traumatic event. I have thought of where the balloons go but I see it doing more psychological good as a whole. For weddings and other celebrations, I guess it has the symbolic reverence of eternity.
I approve.
I didn't take part as it happened and I was attending my husband's 50th class reunion.

I do not agree with them and I feel they are bad for the environment. there are errrr ways to remember/memorialize etc
I do not think anyone thinks about what happens to balloons when they are released into the air, the focus is on the event.
I do often consider what happens to the balloons and what effect it has on wildlife and the environment.
I don't agree with releasing balloons because I believe it to be bad for the environment.
I don't have a problem with them. My family found a balloon last year with a note in it and we emailed the address on the note. Found out that it traveled halfway across the country in a few days. My children were so impressed and learned so much that it has been a story we have told over and over. I know that the balloons are not that great for the environment, but are there environmentally-safe balloons out yet?
I don't think it's great for the environment. I appreciate the visual, but I worry about the impact on wildlife. If there was some way to guarantee they disintegrated without harm, I'd be interested in that.
I feel that a balloon release should be for a particular reason. Latex balloons should be used rather than the mylar type which do not break down. I realize that balloons are a hazard to wildlife and aquatic animals.
I feel that releasing balloons into the environment is environmentally negligent.
I find the act of releasing balloons a regional practice. Growing up in New England, we had balloons at events, but never released them to release them.
I had not ever thought about this concern before, thank you for the survey and making me aware of the issue
I have always thought that this is a bad practice for our environment. It seems to me to be littering.
I have been made aware of how dangerous this has become. I am more mindful about doing this now than I was before.
I have heard of balloon releases being used to help people who are grieving the loss of a loved one. Notes are written, placed inside and then released into the air. I think this is a nice gesture. However, I believe only biodegradable balloons should be used.
I have little to no knowledge about the effects that the release of such balloons have on the environment.
I have only attended balloon releases for the memorial service for children. These services have been planned by other children.
I have recently seen a lot about the damage between animal deaths and balloon releases and I AM an animal lover. I just think that I would rather focus on getting the communist president out of the white house or keeping rapist behind bars longer that I care about one animal dying because of my balloon that made my kids feel so good to release to their granny in heaven.
I have seen balloons at least 120 miles out to sea. Cannot stand it.
I know that they can float into the ocean and sea turtles think they are jellyfish and will eat them and then they can die since they are stuck in their stomachs
I know they aren't safe for the environment and I wish there balloons that would break down
I live in the Chesapeake Bay Watershed. I do not support the release of balloons for any reason.
I stress that we do not release balloons for environmental reasons.
I think blogs on wedding planning, memorial services, etc. make people more aware about the dangers of release balloons and throwing rice. They also offer alternative ideas. I think this is a contributing factor on why I have not been invited to an event in which I have seen this take place.
I think in the olden days, people tried to release a hundred flying white doves but in the advent of mylar balloons, this at first seemed to be a nice alternative than capturing and freeing all those birds. I think

the world should think of something new---no captured animals and no mylar or plastic! The environmental considerations for habitat and ecology need to be 21st century models of reduce frivolous waste of resources, re-use environmentally safe items into the air, and re-cycle.
I think it kills birds and other animals that might ingest the deflated balloon.
I think they are a lot of fun.
I think they are bad not only for the planet but for the wildlife as well. Although I attend I do not release a balloon. Your survey does not specify whether or not the balloons are rubber or Mylar. I am not aware of the effects Mylar balloons have on the environment so I cannot comment on that. However I would not release them into the air for that reason alone.
I try to be vocal about not releasing balloons, even individually.
I was in a youth program for my church in 1989 and convinced them to not release ;)
I wish it was illegal.
I wish people could find another way to celebrate that doesn't cause damage to the environment or animals.
I wish people would stop doing it or it be outlawed.It is very harmful to animals and the environment.
I wish they were biodegradable. They are lovely to watch floating into the heavens. But seeing them tangled in trees and wires is dangerous and sad.
I would not release balloons into the air on purpose. It doesn't seem like it would be good for the environment although I'm not sure exactly what happens.
I would really like to see balloon releases banned. I would also like to see environmentally friendly options promoted. I think providing information to funeral homes, wedding venders, etc. would be useful.
In regards to question #12, I have no real knowledge of whether the balloons are biodegradable or not. I do not know the environmental impact of balloons. I believe further research would need to be done on that, rather than asking the general public of their opinion on the matter.
It is my understanding that balloon launches are prohibited, especially in areas where flight paths could be impacted.
It is not an environmentally safe practice. Balloons cause health risks for animals and fish. It is nothing more than a legal form of littering.
It is of no interest to me.
It is so bad for birds and sea life. Balloon releases should be illegal.
it is very harmful to animals and the environment and I will never participate
It seems like a pointless thing to do, regardless of the consequences to nature.
It would be wonderful to have balloons made of a material that breaks down faster and has a smaller impact on the environment.
It's a bad idea.
It's about all I have right now to comfort me and I will continue to do them. As mentioned earlier it is usually just one or at times, 5, and I realize this does not make the issue any better, but when they go out of sight I imagine he gets them and I need him to know I am thinking of him. It'd be difficult to explain or expect a grieving mother to think any differently.
It's cool to find one.
It's disappointing that more people don't realize the devastating effects balloons (and other trash) can have on wildlife.
It's very bad to release balloons!
Longwood University Student
longwood university student

Longwood University Student
Longwood University Student
Longwood University Student
Longwood University Student
Longwood University Student
Longwood University Student
longwood university student
longwood university student
longwood university student
longwood university student
longwood university student
longwood university student
longwood university student
Longwood university student. ""I feel that balloon release should be replaced with an alternative methods of celebration because they are ultimately harmful to animals and the environment.
longwood university student. ""I know balloons being released is very bad for the environment but I know an event right here on campus released balloons last week. I wish there was a safer alternative for people wanting to express the symbolism that they do when releasing balloons.
Many of these balloons kill wildlife upon returning to the ground. Eastern Shore Wildlife has an excellent presentation on this.
More education needs to be given to the public about how harmful it is to the environment and wildlife.
My concern is for wildlife that may ingest the balloon or get caught in it. Swallowing a balloon is a choking hazard for humans and could be for other animals.
My sister is a marine biologist and I have a degree in biology. We have pulled balloons out of dead marine mammals. It should be illegal to release balloons into the environment. Period.
Need to promote releasing butterflies instead.
Not really sure what happens to latex balloons but know that I've seen Mylar balloons stuck in various different places along with the curly ribbon still attached.
Now I am interested in finding out what happens to the balloons.
Of all of the environmental issues that need to be dealt with, this is a big deal??? How about the weather balloons released multiple times daily around the country.
Only one balloon was released.
Pawn to King 4
People should choose a way to commemorate event that is more environmentally friendly.
Place a tag on the balloon to request the finder to email the person who released the balloon to track the wind currents in the upper atmosphere.
rain barrel workshop attendee
rain barrel workshop attendee
rain barrel workshop attendee
rain barrel workshop attendee
Released balloons endanger wildlife and become trash which effects the environment.
Releasing a balloon is like throwing paper out of your car window. It is littering and I would not do it.
Should be stopped!
Someone needs to invent biodegradable balloons.
The balloon release was at a college football game so there was nothing I could do. I would not

purposely participate in an event that released balloons, but you never know when it will be done.
There are far more appropriate ways to show appreciation than the waste balloon cause. Pick up litter, plant a tree, restore a habitat, ride a bike
There are other ways to perform a ceremony without balloons and risking the balance in our environment.
There is a state law concerning the number of balloons that can be released at one time. Please check the Code of Virginia prior to a release ceremony.
They are fun!
they are super bad for the environment and should be considered as littering
They are very harmful to the environment and I would not participate. It is also illegal.
They should be illegal due to environmental impacts to wildlife.
they should be outlawed
They should be outlawed because they are harmful to the environment.
This makes me think about where balloons go. I truly never once thought about it.
Very unkind for the environment...
What really happens to balloons after they are released into the air?
Why release balloons in rural areas where there are trees?

1. These last questions are just to help classify the survey. What is your age?

   Less than 18 *%
   18 to 34 19%
   35 to 49 41%
   50 to 64 35%
   65 or older 5%

1. What is the last grade in school that you completed?

   Up to 11th Grade 0%
   High school diploma or GED 3%
   Attended college or technical school 9%
   Bachelor's degree 20%
   Graduate degree 67%

1. What is your gender?

   Female 75%
   Male 25%

18. What is your home zip code? *(Required) (number box)*

Thank you for your participation in this survey. Your responses have been recorded.

Appendix E
Outline of Joyful Send-off Campaign Strategy

Joyful Send-Off Campaign Strategy Components	
Ads and Advertorials in Wedding Magazines - Print and On-line CBSM Tool-Technique: ***Captivating Communication*** *- vivid, personal and concrete - How are we reaching, conveying the campaign message to our target audience (brides, grooms, planners)? What outlets are most effective?*	

Production Notes:	• *VOW Magazine - published January 2017 - ¼ page ad*
	• *Coastal Virginia Wedding Magazine*
	  o *July 14 - copy deadline* - Full page ad, 1-page (adjoining) advertorial, Wedding List Photo listing
	  o Virginia to design ad; Virginia and Katie to write advertorial - will need to distribute for review (who should review?)
	• Still Photography captured by Dragon Studies
	• Create chart of bridal magazines' ad deadlines, prices, regional vs national, scope of reach, on-line option, e-newsletter options, editorial options

Roll-out/Distribution Plan (Dates, Methods):	• Drive brides to www.JoyfulSend-Off.org for alternative send-off ideas - via link in ad • Post ad release - and link to online edition of magazine on Joyful Send-off social media sites
Evaluation-Tracking Methods:	
Social Media - Facebook, Instagram, Twitter, Pinterest CBSM Tool-Technique: ***Captivating Communication*** *- vivid, personal and concrete - How are we reaching, conveying the campaign message to our target audience (brides, grooms, planners)? What outlets are most effective?*	

Production Notes:	• *Sites established:*
	  o https://www.facebook.com/joyfulsendoffva/
	  o Instagram login is: joyfulsendoff and the password is: noballoons2017 - the password is the same for Twitter
	• A table to generate and share content and ideas for posts has been set-up in Google Drive - need to convey this to Misty

Roll-out/Distribution Plan (Dates, Methods):	• Drive brides to www.JoyfulSend-Off.org for alternative send-off ideas via posts • Misty has started generating content for the social media sites under the Dragon Studios contract, and she will continue helping to populate the sites through 2017-2018.
Evaluation-Tracking Methods:	• Misty is tracking hits and visits to the sites

Joyful Send-off Website CBSM Tool-Technique: ***Captivating Communication*** *- vivid, personal and concrete - How are we reaching, conveying the campaign message to our target audience (brides, grooms, planners)? What outlets are most effective?*	
Production Notes:	• *Site established:* o www.JoyfulSend-Off.org
Roll-out/Distribution Plan (Dates, Methods):	• Sells wedding send-off alternatives (litter free) to balloon release • Includes content on the impact of balloon releases • We need an origination story - background story as to why we are doing this, why we are offering these great alternatives - why we came up with cool ideas to reduce the release of balloons - this immediately pivots to the positive - remain positive while getting across the problem • Continue to add content, including new photography and videos when completed • Add a tab and content for venues • Forward joyfulsendoff.org to .info site • Add link to survey for feedback
Evaluation-Tracking Methods:	• Misty is tracking hits and visits to the sites
Wedding Show Exhibits CBSM Tool-Technique: *Captivating Communication through personal contact with brides and grooms, as well as with wedding providers who will influence the couples' decisions about how they will conduct their wedding. Speaking with brides/grooms at wedding shows provided a venue to test campaign messages and imagery and to gather valuable input. We were also able to get a commitment from brides and grooms to provide additional input after the shows, and contact information for all attendees for further survey work, as needed.*	
Roll-out/Distribution Plan (Dates, Methods):	• Exhibit at Wedding shows in Hampton (January 2017) and Virginia Beach (February 2017) • Distributed two handouts encouraging use of one wedding send-off alternatives - champagne bottle bubbles at the exhibit space and magnets distributed in the bridal bag distributed to all brides participating in the two events • Exhibit and handouts designed to drive brides to www.JoyfulSend-Off.org for alternative send-off ideas • Provide partner vendors with wedding alternative videos for possible big-screen showing at future wedding shows • Provide vendor partners with small poster - for wall or table - to advertize at their wedding show exhibits that they are partners in the Joyful Send-off campaign
Evaluation-Tracking Methods:	• Survey ALL of the brides for whom we have email addresses whose weddings were in April, May or June. o Ask: what did you do for your sendoff?

	o What was your decision-making process o Were there any ideas that you rejected? If so, why? o Other litter-free and eco-friendly questions o Did you visit our website? If so, did it influence you?
Production Notes:	• These were purchased as handout at the two Bridal Shows. They featured the Campaign website address.
Champagne Bottles CBSM Tool-Technique: *Captivating Communication - vivid, personal and concrete - How are we reaching, conveying the campaign message to our target audience (brides, grooms, planners)?*	
Production Notes:	• These were purchased as handout at the two Bridal Shows. They featured the Campaign website address.
Roll-out/Distribution Plan (Dates, Methods):	• Handout encouraging use of one alternative send-off - bubbles • Drive brides to www.JoyfulSend-Off.org for alternative send-off ideas via posts • Distributed at bridal shows and could be distributed by vendors if supplies and funding permit
Evaluation-Tracking Methods:	• This item was very popular.
Magnets CBSM Tool-Technique: *Captivating Communication - vivid, personal and concrete - How are we reaching, conveying the campaign message to our target audience (brides, grooms, planners)?*	
Production Notes:	• These were purchased as a handout at the two Bridal Shows. They featured imagery encouraging the use of wedding send-off alternatives and the Campaign website address.
Roll-out/Distribution Plan (Dates, Methods):	• Drive brides to www.JoyfulSend-Off.org for alternative send-off ideas via posts • Distributed at bridal shows and could be distributed by vendors if supplies and funding permit
Evaluation-Tracking Methods:	• This item was very popular.
Partnering with Wedding Venues and Providers CBSM Tool-Technique: **Prompts** - *clear and specific - at the point where couples are making a decision about how they will exit their wedding. Also address convenience of wedding alternatives through step-by-step instructions - ordering or*	
Production Notes:	• Provide all partnering venues and wedding providers with the Joyful Send-off logo to post on their websites; provide info on sharing Joyful Send-off posts on social media.

	● Produce video of interviews with wedding venues and other providers about why they are partnering in the Joyful Send-off campaign. ● Survey venues about whether they would help the campaign reach wedding provider groups and association through campaign presentations, ads in provider publications and newsletters etc. ● Work with venues on placement of prompts targeted at couples during wedding planning. Gain venue feedback on other types of communication materials are presented at the venue and best way to capture the attention of the couples. ***Materials for venues/vendors:*** 1. *Joyful Send-off logo (PNG) for websites - with brief description* 2. *Counter or desk top display (8 ½ X 11" in photo frame)* 3. *8.5 x 11" information sheet to provide to brides - insert in folder already being provided by venue (format also available with an open space for venues to customize if desired)* 4. *Campaign calling cards* 5. *Champagne bottle bubbles as samples and possible distribution to interested couples* *6. Sample ribbon wand* ● Provide partner vendors with wedding alternative videos for possible big-screen showing at wedding shows
Roll-out/Distribution Plan (Dates, Methods):	● Interview a few employees at venues to learn what materials would be of interest to them ● Use the business cards that were collected during the VOW bridal show in Feb 2017. ● Design the printed pieces using the advertorial and ad artwork submitted to Coastal Virginia Brides magazine ● Distribute materials o via US mail (after contacting venue by phone) o via hand-delivery when possible o at a meeting/event where vendors & venues congregate
Evaluation-Tracking Methods:	●

Appendix F
Balloon litter monitoring in-the-field data form

Date: Location: Volunteers:

GPS	Type	Color/Shape	Ribbon/ Attach	Condition	Location on Beach	Notes: ID, Occasion, Etc.
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	
	L F RO			B D N P	L M H	

Page_____ of _____

Key: Balloon type (F=foil, L=latex, RO=ribbon only)
Condition (B=burst, D=deflated, N=nub, P=piece)
Location on beach (L=low, M=mid, H=high)