

# Stormwater + Litter Workshop

## June 13, 2018

Sponsored by the Virginia Coastal Zone Management Program and organized by Clean Virginia Waterways

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### Notes From Break Out Groups

During the workshop, the attendees broke into small groups for sharing and exchanging information and to identify challenges and opportunities for future work on litter prevention. Workshop attendees from cities or counties with populations of 100,000 or more (Phase I Municipal Separate Storm Sewer System [MS4]) met in three breakouts, and attendees from smaller cities and counties (Phase II) met in three other groups.

Phase I Groups: Notes for these breakouts were taken by Laura McKay (VA Coastal Zone Management Program), Katie Register (Clean Virginia Waterways of Longwood University) and Hannah Seligmann (Alice Ferguson Foundation)

Phase II Groups: Notes for these breakouts were taken by Ruth Minich-Hobson (Virginia Department of Environmental Quality), Jason Rolfe (NOAA Marine Debris Program), and Virginia Witmer (VA Coastal Zone Management Program),

### PHASE I MS4 Permit Cities and Counties

#### Efforts to Decrease Litter/Challenges

- Hampton Roads PDC – There is a regional education campaign – “Ask HR Green”. Recycling promotion, media campaigns.
- Fairfax Soil & Water: Storm drain markings – uses volunteers. Direct education with Enviroscape model.

#### Removing Litter (cleanups and removal at stormwater drains, etc.)

- Revenue from Bag Bill in Washington DC. How much does it generate? How could other bag bills be written to make sure that revenues are spent on litter prevention and removal (trash traps, storm drain maintenance, cleanups, etc.)
- Cleanups: Many communities have cleanups through the International Coastal Cleanup every fall, the Clean the Bay Day in the spring or regional events like the Potomac River Cleanup. Also through adopt-a-highway and adopt-a stream. Also, “Friends” groups organize cleanups. Some of these cleanups collect data on types of litter, but most only record the weight of trash and number of volunteers.
- Chesapeake has a series of work orders to clean up floatables at outfalls. Next year proposed BMP maintenance crew to remove floatables. Will prioritize areas based on visual surveys. Usually near busiest roads. Not enough help there.
- Chesterfield has 3 staff dedicated to litter control. Works with residents on compliance. Doing monitoring to check effectiveness. Have dedicated BMP crews (county employees do maintenance). Staff level is good.
- Norfolk. BMP crew takes care of just BMPs. Every storm drain cleaned on a list – every 2 years. Street sweeping of neighborhoods is done monthly. Downtown streets swept

daily. Have an inspector who checks every drain - pops cover of the basins. Could use more but are maxed out financially. Keep Norfolk Beautiful does litter prevention education and school visits and clean ups every weekend.

- Washington DC: Clean-ups are low hanging fruit – they are cheap with volunteers.

### **Floatables Monitoring**

- Monitoring – how is this being done – or how could it be done in the future?
- It seems like each community is coming up with its own monitoring protocol.
- Each community creates its own monitoring Apps or data forms- not good for monitoring
- Data collection – some volunteers don't like it
- Are the data being used? Does it matter? Data collection/monitoring (permit requires it, but how to do it) – create transferable programs based on new research
- One standard protocol for monitoring would make the data comparable throughout the state.
- Maintaining bond along with volunteers and nonprofits: important since we don't have resources to do all the monitoring with our staff.
- Chesterfield reports loading rates but it's hard to estimate in 2 years time. Seems unnecessary. Don't have a big issue with litter. Floatables monitoring at 5 outfalls does not suggest that there is a problem.
- Fairfax – there's a MS4 monitoring requirement. Community groups not thrilled – just box to check off – count it and no further requirement. Ben Counts number of bags with Alice Ferguson Foundation – get weights and volunteer numbers
- Public works dept. takes students to streams for trash monitoring
- Challenges: woody organic material, Trackable floatables

### **Challenges**

- MS4 Permit language could be clearer. Took us a while for us to understand expectations.
- MS4 permits need to be tailored for military bases. Bases are different than cities.
- The language in the permits is not clear or explicit, which leaves a lot of room for interpretation and minimal accountability. Specific language that can be standard across permits but also individualized for each jurisdiction is valued.
- Enforcement: we need the ability to implement ordinances to go after chronic litters – household trash at strip mall dumpsters. Need simple procedures to prosecute – need civil penalties like D.C. – but still needs to be priority for police.
- Problem with unlicensed haulers
- Some communities need multi-lingual outreach – especially housekeeping issues and restaurants
- Resources: need funding for staff (time) and infrastructure. Funding would come if this were a priority
- Funding: Interested in exploring having the VA Litter and Recycling Tax updated to include for 40+ years of inflation. This tax, if it had been indexed to inflation, could provide some much needed funding for storm water infrastructure and maintenance to keep litter out of the streams and rivers.
- Maintenance: It is no good to add receptacles but have no staff to empty them. People see overflow
- Bad behavior: we need proven tools to change littering behaviors.
- Picking up litter—a losing battle. Too few cleaning up against too many who litter (or don't manage their waste correctly.)

- Production of waste: there is so much food packaging. But decreasing the amount of waste we produce generally can't be done on a citywide level. Needs state or regional action. Especially convenience and fast food packaging.
- Non-profit partnerships can be a great asset. Non-profits can help with capacity and can help communicate some of the technical terms from the permit into language that can be understood by the community. However, what do jurisdictions do that do not have a non-profit partner?
- Economics of SW and litter - Value of waste (if we used more alum than plastic, etc.)
- Litter: some is intentional and some is unintentional
- Waste management issues
- Regional campaigns – how to get info out and who is target audience
- A related problem: landscapers who rake (or blow) leaves and grass clippings into storm drains
- Consistent messaging is needed. Could VA have one litter prevention message? And a well-funded campaign like “Don't mess With Texas”?

### **What resources are needed**

- IDDE (Illicit Discharge Detection and Elimination) workshop
- Data sharing and opportunities for collaboration
- Clear expectations between public and private partnerships. We need dedicated leadership
- Are there ways to incorporate CBSM (Community-based social marketing) into clean ups??
- Sources of litter – is there a study? We know WHAT we find, but is it mostly from littering, poor waste management, uncovered trash trucks?)
- Support from others VDOT leadership
- SW Engineers and Ecologists – Concerns about maintenance of instream traps – Stressful on SW crews – Volunteers and maintenance of traps + liability – Emphasis on Parks
- List resources to meet reduction goals

### **Possible Solutions**

- Focus on drainage area as a target location.
- Partnerships between the private and public sectors.
- Businesses – get them engaged. We need to focus less on “Don't Litter” and more on source reduction.
- Identify knowledgeable legislators, Get legislators involved – start with supportive ones.
- Groups working together to craft successful legislation.
- Educate, Innovate, Legislate – we need to use all three of these to tackle this issue.
- Develop CBSM champions – especially for plastics
- Statewide campaigns and with VDOT in rural areas.
- Resource page w/ summary of this workshop
- Training in CBSM (But Stormwater engineers would not be the best target audience. Still, we need to understand how it works.
- Standard monitoring protocols - Statewide monitoring protocol
- Ongoing communication – Website, Meetings/Workshops, Webinar, Field trips, Other existing networks/groups that would contribute
- CBSM for VA (like “Don't Mess with Texas”) on common issues with local specialization.
- Build partnerships with nonprofits such as Keep Norfolk Beautiful

- Remember places without MS4 Permits therefore no requirements – Focus on complying with permit. Clean manageable expectation – Not up to individual managers
- Community Pride + education + resource = change. How to build community pride in places with transient populations?
- Bay-Friendly businesses – focus on using less single-use things (refusing) – For example, straws on request – Work with Hospitality businesses
- Why not have all Phase I communities work together?
- Sticker messages – people need to hear a message 20+ times
- Cleanup kits – have them at library to check out
- Signage “Adopt A \_\_\_\_” can lead to a sense of ownership

## PHASE II CITIES –

### Efforts to Decrease Litter/Challenges

- City of Suffolk – Largest land area for a City in Virginia. They have a couple cleanups yearly. They retrieve plastics at high tide and glass at low tide. They conduct education outreach. They see a mix of litter dependent upon land use area: they see fast food trash in downtown areas and more farm related trash in rural areas. They have an “Adopt of Spot” program with 1000s of volunteer hours and this has been successful, as volunteers will stay connected for years. One new program is coordinated through their library system. They provide cleanup kits including promotional material, bucket, safety vests, four “litter grabbers” and anyone who is 18 years or older can use their library card to take out a kit to do clean up in the area. Volunteer support and attention is key.
- Messaging through Suffolk – Storm Drain stenciling/marketing with volunteers. “Ask HR Green” – Many in south believe that water in storm drains is treated. Stenciling storm drains attracts interest. Education component working on monitoring. Question of long-term benefits and effectiveness. Recycling drive/collaborate with waste Authority
- Albemarle County – They work on identifying locations in need of litter cleanup so that volunteer time is used well. They have many stormwater facilities to inspect including private property stormwater facilities. The materials that are picked up are typically organic debris and trash.
- Community education efforts include “Write as Rain”. This includes “magically” appearing messages on sidewalks when they become wet. See <http://askhrgreen.org/rainyday/>
- Hampton –
  - Grass clippings into storm drains is an issue.
  - Strong adopt-a-spot program. 800-900 Cleanups/year 3000-4000 bags of trash. Includes education components.
  - Social media and website. Education in school. Don’t have budget or manpower for evaluation and monitoring.
- Some communities reach out to schools and have displays at public events about litter prevention.
- Some communities have Adopt-a-street programs and use social media.
- Petersburg Richmond and other counties, working on messaging to public behavior change. Maybe need help with marketing. Student led contest to create appropriate branding/messaging
- Prince William County – They have many stormwater facilities to inspect including dry ponds, wet ponds and bioretention areas. Some of these can end up of being trash receptacles. They are interested in methods for end-of-pipe clean up. This would allow

removal in just the inlet area, instead of the whole pond. They plan to talk with Matt Robinson of DC (presented today as part of the program) and do a site visit and pilot study of methods being used within his jurisdiction. There is need for regular street sweeping as part of the MS4. One thing they have found to be very beneficial is proposing the stormwater facility as an “amenity” for a commercial business. They talk to a commercial business about the stormwater facility adjacent to their location and ask them to adopt the pond for cleanup. The parking lot areas are cleaner and signage is key so that the commercial business gets the recognition for their efforts. Prince William has their own sign shop to provide for this requirement. They have expanded their “Adopt a Stream” program to include this as a benefit since it is a water feature on the property. This is part of changing perception of the importance of these facilities and benefit to the surrounding area. The stormwater facility goes from being functional to an asset. This can include planting with wildflowers, Prince William (PW) county students to help monitor water quality and Adopt A Stream program – floatable monitoring. Increasing number of clean-up sites. Advertise ability to clean-up in streams has resulted in increased number volunteers. They work with DPW in order do these cleanups, as it’s not part of their core county missions. **These efforts take leadership by a dedicated volunteer leader. There is often one person who everyone in the community knows (who also knows everyone in the community) and that person is the glue and catalyst**

- Joint Base Langley Eustis – On a federal facility there are different issues including different responsible parties on the same site. They do not have a lot of funding for these programs. They participate in Clean the Bay Days with clean up along the James River and Eustis Lake. The military families have dedicated schools on the Fort and those teachers and student are very engaged in cleanup efforts.
- The military has Standard Operating Procedures on how to manage litter. Stormwater, wastewater and permitting are overwhelming tasks. They have mandatory training on environmental programs, including litter and hazmats. Good network of volunteer support for clean-up days, Earth week, lots of structured activities, raingardens and BMPs. Art contests to represent the world they want to see.
- Large federal facility has only 2 people on Stormwater team – **they are understaffed**. Not enough hours in the day to educate their co-workers. Email marketing isn’t really working

#### **Floatables Monitoring Comments from the group**

- It is key to know the drainage areas as well as land use to target areas of need. Collection of data from stream corridors and stormwater ponds is necessary to document efforts and quantities of litter cleaned up. Standardization of floatables is tricky. Working with volunteers doing clean up takes time to get verifiable data. Sometimes it takes extrapolating the information to get a summary. The NOAA Marine Debris Tracker discussed today would be beneficial. Photos of before and after a cleanup are beneficial.
- Monitoring effort varies greatly between different communities.
- Prince William uses a standard data form – all types and descriptions – conduct their monitoring on a quarterly frequency. Kids encouraged to use data form. Dept of Parks Rec took funding away and then PW county had to find a way to keep program going. **Permitting requires monitoring but not sure how monitoring will occur with no new funding or staff**

## Challenges

- Contamination - Waste management won't take cardboard if it's mixed with trash. For example, pizza left in a pizza box. How to monitor this? How to get compliance with the public on "clean" recycling.
- **Economic incentives** - Losing money on plastic bottles (have no current value) – aluminum cans have value
- **The changing economics of recycling** – we need information on how to respond. It seems like making less waste is the only long-term viable solution. But is the "job" of us in stormwater?
- **Staffing continues to be challenge**
- Cigarette butts are everywhere
- Hampton – a lot of military – transient population. Repetition of message (People large poor population – tired of basic issues of greater concern). Frustrated in working with Public Works – understanding of land to water
- Roadside Litter – especially along on-and-off ramps. Often too dangerous for volunteer cleanup activities. Also, roadside mowing cuts litter into many more pieces. Could litter cleanups be scheduled prior to mowing?
- EPA – stickiness of messages need to hear 27 times (Heard during National Geographic Presentation).
- Enforcement would help. New Orleans reductions in trucker littering – signs to hold trash to next stop
- VDOT responsibility – "Weird other realm." VDOT uses contractors
- Trying to get sheriff's office involved
- Opportunity – New communications director from VDOT
- Uncovered trash cans cause unintentional litter
- Along highway-tractor trailers plows over cans. People don't care – worried about next meal and not where litter goes
- Monitored use of dumpster for contaminations recycled

## What resources are needed

- **No facilities to recycle near many apartment complexes.** Some connection between apartment complexes and waste management/ recycling is needed. Who does that bridging/explaining/coercing? Some buildings have dozens of apartments, but a small (or no) area for recycling bins.
- Agencies are only doing the monitoring because it is required and sometimes at the very last minute. Suggest monitoring should be done as part of the day job, but how?
- More resources: Staff and money
- Trash can on every block with truck collection and litter stick in every garage
- Pledging – hiking and trash pickup – it's the new thing
- More info sharing like today
- MS4 permits and implementation techniques to be shared among practitioners/agencies
- Legislation: Take a better look at relevant legislation and **Inform the legislators of what is needed and invited to these meetings.** Explore possible legislation for plastic bags, a bottle bill, and banning straws and foamed plastic (Styrofoam) containers.
- Litter Tax: Getting legislators involved in raising this tax (since it has not been raised for 40+ years) AND discuss the distribution of the litter tax fund monies. Could some of the Litter Tax fund support more stormwater infrastructure, maintenance and more litter prevention campaigns.
- Get big businesses involved and have them pay forward to implement litter reduction

programs.

- Dumpsters are a big problem since there is a lot of litter in these areas so there needs to be attention on this issue. Someone came up with what could be a logo as follows: “Bag and tie your trash so it does not fly.”
- There is a need to identify sources of trash.
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#### **Who Should Be Involved?**

- Partner with city community groups, nonprofits, etc.
- Leadership needs to be more aware and interested in importance of issue. Take city officials on a “Tour de trash”
- University/Community college students are a source of volunteers – need community service. Many schools have a volunteer coordination office. Get on their list.
- Regional approach to conduct/baseline research and share and pilot/create transferable programs
- State wide campaign (**There was a lot of support for this idea during the workshop**) – Should include business – Maybe focus on anti-waste as well as anti-litter

#### **For more information on this workshop, please contact:**

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#### **For more information on combating litter and marine debris, including the “Virginia Marine Debris Reduction Plan” visit:**

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