

## **BMP 1-7. Targeted Education Program**

**\* This BMP is a joint project with the County of Roanoke. The annual mailing and/or distribution of the educational materials for this targeted education program by the County of Roanoke included the Town of Vinton households, businesses, and contractors involved in land-disturbing activities.**

**Goal:** The goal of this BMP is to develop a stormwater quality education program for specific target audiences, as shown in Table 13 below. This BMP will provide information to these audiences in an effort to increase awareness of the impact of illicit discharges into the Town's storm sewer system from activities around the home or in connection with various business operations, and it is focused on the aforementioned three high-priority water quality issues: sediment, bacteria, and nutrients. The program is directed toward residents and certain groups of commercial, industrial, and institutional organizations that are most likely to have significant impacts to local stormwater quality. County of Roanoke included the Town's household and business owners when they do their annual mailing of these education mailers.

**Measurable Goal:** The County of Roanoke distributed previously revised postcards to two targeted audiences in the County and Town: auto car wash/detailing operations and restaurants in the County and Town of Vinton. These business types were chosen because car washing operations can have an adverse impact on local water quality through direct discharges of polluted wash waters; restaurants often rinse greasy range hoods and kitchen mats into the storm drainage system. In addition, a new brochure was also developed, Fact Sheet, and a poster to target certain audiences. As mentioned in BMP 1-5, the County, in conjunction with RVTV, developed a new Public Service Announcement (PSA) [along with a complementary poster] entitled "Granny Says" to share information with the public as part of its stormwater public awareness/ education program. This PSA primarily focuses on illicit discharges, encouraging folks to "do the right things," such as not littering, picking up after pets, bagging leaves and grass clippings, and pouring nothing down the storm drain. As with the earlier PSAs, the overarching goal was to address the three high priority water quality issues: bacteria, nutrients, and sediments. Please see the following Table 4, 4-A, 4-B, 4-C, and 4-D.

**TMDL Consistency:** The car wash postcard targets local businesses that may have uncontrolled discharges from vehicle washing operations, which could increase sediment discharges into local receiving waters. Therefore, these postcards address the TMDL for sediment (SED). Similarly, the restaurant postcard addresses rinsing of kitchen equipment and accessories, which may contribute bacteria to receiving waters. Thus, the restaurant postcard helps address the Town's TMDL for bacteria (EC/FC). The materials developed exclusively by the County/Town also address the TMDLs, as shown in the table.

**Evaluation and Modification:** Town Staff received phone calls following the mail-out of the various materials by the County. Additionally, according to Roanoke County Staff, they received numerous calls from local veterinary offices requesting additional copies of the "Poop Fairy" posters and brochures; also, several residents called to thank the County for the annual newsletter. The County and Town believe this program is an effective BMP to raise awareness about the impact of illicit discharges into the County's storm sewer system.

High-Priority Water Quality Issue	Target Audiences	Means to Determine Audience Size	Estimated Audience Size	Overall Messages	Means to Deliver Messages	Rationale
#1 Sediment	Car Washing/Detail Facilities	Business Licenses/Google	7	<ul style="list-style-type: none"> <li>All wash water to sanitary sewer.</li> <li>Potential damage caused to streams by wash water.</li> </ul>	<ul style="list-style-type: none"> <li>Mailer, annually</li> <li>PSAs on local cable station</li> </ul>	Commercial car wash facilities can contribute significant sediment if wash water is discharged into the Town's MS4.
	Car Dealers	Business Licenses/Google	3	<ul style="list-style-type: none"> <li>All wash water to sanitary sewer.</li> <li>Potential damage caused to streams by wash water.</li> </ul>	<ul style="list-style-type: none"> <li>Mailer, annually</li> <li>PSAs on local cable station</li> </ul>	Vehicle washing/detailing can contribute significant sediment if wash water is discharged into the Town's MS4, which drains, untreated, to local streams.
	Auto Body Shops	Business Licenses/Google	16	<ul style="list-style-type: none"> <li>All wash water to sanitary sewer.</li> <li>Potential damage caused to streams by wash water.</li> <li>Direct wash water to grass area for filtration and infiltration.</li> <li>Never allow wash water to flow into street or storm drains.</li> </ul>	<ul style="list-style-type: none"> <li>Publication sent annually to ROCO/TCV homeowners</li> <li>PSAs on local cable station</li> <li>Handouts at local environmental events, 4 per year minimum</li> </ul>	
	Homeowners	Tax Records	3,500	<ul style="list-style-type: none"> <li>Potential damage caused to streams by wash water.</li> <li>Direct wash water to grass area for filtration and infiltration.</li> <li>Never allow wash water to flow into street or storm drains.</li> </ul>	<ul style="list-style-type: none"> <li>Brochure given to land-disturbance permittee when permit is issued</li> <li>Brochure given with enforcement actions</li> </ul>	Erosion and sediment control is required by regulations; however, more effective implementation may occur with additional education.
Contractors Involved in Land-Disturbing Activities	Business Licenses	19	<ul style="list-style-type: none"> <li>Damage caused to streams by sediments.</li> <li>Healthy fish populations require clear stream bottoms.</li> <li>Silt fence is not enough.</li> <li>Limit disturbed areas.</li> <li>Stabilize as quickly as possible.</li> </ul>			

High-Priority Water Quality Issue	Target Audiences	Means to Determine Audience Size	Estimated Audience Size	Overall Messages	Means to Deliver Messages	Rationale
<b>#2 Bacteria</b>	Restaurants	Business Licenses/ Yellow Pages	22	<ul style="list-style-type: none"> <li>Excessive bacteria hinder stream usage and contribute to algae overgrowth, which hurts aquatic life.</li> <li>All wastewater to sanitary sewers.</li> <li>Keep exterior trash receptacles and dumpsters covered and do not wash out into storm drain.</li> <li>Clean kitchen hoods and floor mats; properly dispose of wastewater.</li> </ul>	<ul style="list-style-type: none"> <li>Matter, annually</li> <li>PSAs on local cable station</li> </ul>	Uncovered dumpsters containing garbage and dumpsters and greasy floor mats that are rinsed out onto the pavement can contribute bacteria to our MS4, which discharges directly to our streams.
	Pet Owners (dogs/cats)	Pet Licenses	393	<ul style="list-style-type: none"> <li>Excessive bacteria hinder stream usage.</li> <li>Dog waste ends up in streams.</li> <li>Pick up after your pet and properly dispose of waste.</li> </ul>	<ul style="list-style-type: none"> <li>Publication sent annually to ROCCO &amp; TOV Homeowners</li> <li>PSAs on local cable station</li> </ul>	Dog waste is a major source of bacteria in our streams.
	Veterinarian Offices	Business Licenses/ Yellow Pages	1	<ul style="list-style-type: none"> <li>Excessive bacteria hinder stream usage.</li> <li>Dog waste ends up in streams.</li> <li>Pick up after your pet and properly dispose of waste.</li> </ul>	<ul style="list-style-type: none"> <li>Brochures placed in Veterinarian offices, annually</li> <li>PSAs on local cable station</li> </ul>	Dog waste is a major source of bacteria in our streams.
	Pet Stores/Pet Boarding/ Grooming	Business Licenses/ Yellow Pages	3	<ul style="list-style-type: none"> <li>Excessive bacteria hinder stream usage.</li> <li>Dog waste ends up in streams.</li> <li>Pick up after your pet and properly dispose of waste.</li> </ul>	<ul style="list-style-type: none"> <li>Brochures placed in pet stores, annually</li> <li>PSAs on local cable station</li> </ul>	Dog waste is a major source of bacteria in our streams.
	Town Police and Firemen; Animal Control Officer	Town Records	30	<ul style="list-style-type: none"> <li>Excessive bacteria hinder stream usage.</li> <li>Dog waste ends up in streams.</li> <li>Pick up after your pet and properly dispose of waste.</li> </ul>	<ul style="list-style-type: none"> <li>In-house training</li> </ul>	Dog waste is a major source of bacteria in our streams; these County employees own or handle dogs as part of their work.

**Table 4-A. Targeted Education Program: Sediment, Bacteria, and Nutrients**



High-Priority Water Quality Issue	Target Audiences	Means to Determine Audience Size	Estimated Audience Size	Overall Messages	Means to Deliver Messages	Rationale
#3 NUTRIENTS	Homeowners	Tax Records	3,500	<ul style="list-style-type: none"> <li>How nutrients damage streams.</li> <li>Do not over-fertilize. Use soil tests.</li> <li>Keep fertilizer off of pavements.</li> <li>Do not over-water lawns.</li> </ul>	<ul style="list-style-type: none"> <li>County Publication sent annually to ROCCO/OV/HO</li> <li>PSAs on local cable station</li> </ul>	Excessive nutrients are carried off lawns and other managed turf areas to the County's MS4 and then to local streams; this leads to algae overgrowth in the streams, which adversely impacts fish and other marine life.
	Nurses/ Greenhouses	Business Licenses/ Yellow Pages	1	<ul style="list-style-type: none"> <li>How nutrients damage streams.</li> <li>Do not over-fertilize. Use soil tests.</li> <li>Keep fertilizer off of pavements.</li> </ul>	<ul style="list-style-type: none"> <li>Mail, annually</li> <li>PSAs on local cable station</li> </ul>	
	Lawn Care Services	Business Licenses/ Yellow Pages	9	<ul style="list-style-type: none"> <li>How nutrients damage streams.</li> <li>Do not over-fertilize. Use soil tests.</li> <li>Keep fertilizer off of pavements.</li> <li>Encourage use of organic products.</li> </ul>	<ul style="list-style-type: none"> <li>Mail, annually</li> <li>PSAs on local cable station</li> </ul>	

Table 4-B. New and Previously-Developed Print Materials to Address Specific TMDLs

Type	Name	TMDLs Addressed
Poster	"There's No Such Thing as the Poop Fairy"	Bacteria
	"Who Let the Dogs Poop?"	Bacteria
Newsletter	"A Stormwater Guide for Homeowners" April 2017	Bacteria, Sediment, PCBs, and more
	"It's Just Dirt, A newsletter for contractors" April 2017	Bacteria, Sediment, PCBs, and more
Brochure	"It's Just Dirt"	Sediment, PCBs, Minimum ESC Standards
	Stormwater Best Management Practices for Proper Pet Waste Disposal	Sediment
	"Stormwater Best Management Practices for Restaurants"	Bacteria
	"Reduce, Reuse, Recycle and Properly Dispose of Hazardous Household Wastes"	Bacteria, Sediment, PCBs, and more
	"Illicit Discharge Facts"	Bacteria, Sediment, PCBs, and more
	"Facts for Plumbers"	Bacteria, Sediment, PCBs, and more
Fact Sheet	"Facts for Landscapers"	Bacteria, Sediment
	"Fall Foliage Facts"	Bacteria, Sediment and more
	"Fact Sheet for Mosquito Control"	None - published as a Public Health issue
	"Tips for Homeowners - Stormwater Best Practices"	Bacteria, Sediment

**TABLE 4-C. Program Materials and Targeted Audiences for BMP 1-7**

Target Audience	Product Type	Delivery Method	# of Recipients	Nature of Message
Restaurants	Letter and Brochure	Mailed	22	Stormwater Management BMPs for Restaurants; MS4 permit requirements.
	Postcard	Mailed	22	Only rain down the storm drain; no solid or liquid waste; do not rinse out dumpsters.
Car Washes, Auto Repair Shops, New & Used Car Dealers, Auto Detailers, etc.	Postcard	Mailed	17	Wash water carries sediment, oil, and heavy metals to receiving waters.
Vets, Groomers, Pet Daycare and Boarding, etc.	Letter, Brochure, and Poster (TOV only)	Mailed	4	Pet waste pollutes receiving streams; owners are encouraged to pick up after their pets.
Landscaping Professionals	Letter and Fact Sheet (TOV only)	Mailed	10	Grass/shrub clippings, leaves, sediment, fertilizers, etc. cause pollution to receiving waters; use BMPs to minimize lawn debris, reuse stormwater, install erosion controls, and employ alternative lawn care practices.
Violators of Illicit Discharge Ordinance	Fact Sheet(s) applicable to the discharge	Mailed at time of violation	10 (TOV & ROCO)	It is illegal to discharge anything into the MS4 system except for the allowable non-stormwater discharges listed in the permit.
Plumbers	Fact Sheet	Provided on the Counter	unknown	It is illegal to discharge anything into the MS4 system except for the allowable non-stormwater discharges listed in the permit
Contractors involved in Land Disturbing Projects	Brochure	Distributed with Permits	44 (ROCO & TOV)	"It's Just Dirt" – brochure describes the harm to receiving waters from excess sediment from construction sites, explains permit requirements, provides techniques to "keep dirt on the project."
	Newsletter	Mailed	187 (ROCO & TOV)	
Residents	Brochure	Provided in Lobby; sent to schools; mailed with Illicit Discharge notices	>30 (ROCO & TOV)	"Reduce, Reuse, Recycle and properly dispose of hazardous household wastes" brochure.
Residences	Newsletter	Mailed	32,963 (ROCO & TOV)	VSMP Program; proper methods for yard management, car washing, and disposal of hazardous household wastes; reasons to pick up pet waste; avoiding illicit discharges to the MS4.

**Table 4-D. Summary of Targeted Mailings and % Reach in Roanoke County & Town of Vinton**

Annual Period	Type of Educational Material	Target Group	# Sent /Total # in Target Group	% of Target Audience Reached
2013 - 2014 (YEAR 1)	Car Wash Postcard	Businesses with Car Washes	107 / 107	100%
	Restaurant Postcard	Restaurants	115 / 115	100%
	MS4 Permit Brochure for Businesses	All Town Businesses	1,209 / 1,209	100%
2014 - 2015 (YEAR 2)	Car Wash Postcard	Businesses with Car Washes	196 / 196	100%
	It's Just Dirt Brochure	Land-disturbing Contractors	12 / 51	23.5%
	Stormwater Newsletter	Residences	32,599 / 32,599	100%
	Restaurant Postcard + Brochure	Restaurants	125 / 125	100%
	Landscaping Fact Sheet	Professional Landscapers, Nurseries, Greenhouses	88 / 88	100%
	Pet Waste Poster + Brochure	Veterinarians, Groomers, Stables, Pet Daycare, Pet Boarding, etc.	34 / 34	100%
2015 - 2016 (YEAR 3)	Car Wash Postcard	Businesses with Car Washes	103 / 103	100%
	Restaurant Postcard, Letter, and Brochure	Restaurants	127 / 127	100%
	It's Just Dirt Brochure	Land-disturbing Contractors	162 / 97*	>100%
	Stormwater Newsletter	Residences	32,493	100%
	Landscaping Fact Sheet	Professional Landscapers, Nurseries, Greenhouses	117	100%
	Pet Waste Poster, Letter, and Brochure	Veterinarians, Groomers, Stables, Pet Daycare, Pet Boarding, etc.	34	100%
	"Tips for Homeowners - Stormwater Best Practices"	Residential lots using individual stormwater control measures without maintenance agreements	66 / 66 (32 new this year)	100%
2016 - 2017 (YEAR 4)	Car Wash Postcard and Letter	Businesses with Car Washes	78/78	100%
	Restaurant Postcard, Letter, and Brochure	Restaurants	76/76	100%
	It's Just Dirt Newsletter	Land-disturbing Contractors	187/187	>100%
	It's Just Dirt Brochure	Land-disturbing Contractors	162 / 32**	>100%
	Pool Maintenance Facts & Illicit Discharge factsheet	Residences having a pool and pool related businesses	1,551	100%
	Storm Drain Fact Sheet for Landscapers	Professional Landscapers, Nurseries, Greenhouses	106/106	100%
	Pet Waste Poster, Letter, and Brochure "Who Left the Poop"	Veterinarians, Groomers, Stables, Pet Daycare, Pet Boarding, etc.	50/50	100%
	"Tips for Homeowners - Stormwater Best Practices"	Residential lots using individual stormwater control measures without maintenance agreements	66 / 66 (No new ones this Permit year)	100%

\* Total # of RLDs entered into County's LDO tracking system since July 1, 2015; each RLD may obtain multiple permits

\*\* Total # of RLDs entered into County's LDO tracking system since July 1, 2016; each RLD may obtain multiple permits