

Public Education and Outreach Plan

(Effective July 1, 2014; Revised October 20, 2016)

The City of Salem (Salem) operates a Stormwater Management Program in compliance with the Virginia General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit). In accordance with Section II.B.1 of the permit, Salem implements a Public Education and Outreach Program (PEOP) on stormwater impacts.



Consistent with the MS4 General Permit, the PEOP incorporates the following goals:

- Increase the knowledge of Salem’s target audiences about the steps that can be taken to reduce stormwater pollution, placing priority on reducing impacts to impaired waters and other local water pollution concerns;
- Increase the knowledge of Salem’s target audience about hazards associated with illegal discharges and improper disposal of waste, including pertinent legal implications; and
- Implement a diverse program with strategies that are targeted towards audiences most likely to have significant stormwater impacts.

These goals are intended to be met as part of an iterative program that will assess effectiveness of the PEOP by measuring the level of knowledge over time of the City’s public. The PEOP is designed consistent with the MS4 General Permit to:

- Identify 3 high-priority water quality issues and provide rationale for the selection of each issue;
- Identify and estimate the population size of the target audience who is most likely to have significant impacts on each water quality issue;
- Identify the relevant message and associated educational and outreach materials for distribution to the target audiences.

Public participation during the development of the PEOP included the distribution of a survey through mail and email that incorporated questions regarding stormwater runoff and surface water quality. Results are provided in Appendix A. The survey was intended to gauge Salem’s public on their knowledge of stormwater impacts. Response to the survey included 2,053 residents and 106 businesses. Insightful results towards the development of the Program include:

- 90% of respondents indicate they know little or nothing about stormwater pollution.
- 66% of respondents do not know where the storm drain empties or think that it empties into the treatment plant.
- The #1 concern by respondents was bacteria in the waterways. The #2 concern was not enough education on stormwater.
- 21% of dog owners indicate they do not pick up after their pets. Per the dog license database, there are approximately 3,198 dog owners in the City. Only 744 dog owners responded to the survey.

- 80% of respondents do not know if Salem has any projects that deal with stormwater pollution.
- The most frequent way respondents learned about water projects that deal with stormwater pollution was by information pamphlets released and distributed by the City.

Selection of high-priority water quality issues were selected based on results disseminated from the survey and applicable Total Maximum Daily Loads (TMDLs). Salem's high-priority water quality issues for the PEOP are provided below. Based on measures of effectiveness for each, any may be replaced or refined from time to time. Modifications will be reflected in annual reporting with rationale for the modification.

Water Quality Issue No. 1: Improve public education on stormwater impacts

Rationale: This issue was selected based on the results of the public survey that indicate a strong need for increased effectiveness of public education efforts. This rationale is supported with the survey results summarized above and in Attachment A.

Target Audience: Survey results indicate that the entirety of Salem's public audience needs increased education since all could have a positive impact in the improvement of stormwater runoff with knowledge of steps to reduce stormwater pollution. This audience generally includes:

- Population of ±25,000 people

Relevant Message: To address goals of the Program and concerns stemming from the survey results, the relevant message will include:

- General information about stormwater runoff (where it drains, pollutants, etc.)
- Steps that can be taken to reduce stormwater pollution
- Information regarding Salem's Stormwater Program, including information regarding the hazards associated with illegal discharges and improper disposal of waste, including pertinent legal implications
- Contact information for reporting issues that could negatively impact environmental water quality

Outreach Materials to Convey the Relevant Message: A brochure will be distributed by the City with the relevant messages and a link to the Salem stormwater webpage. Brochure distribution was selected as the appropriate mechanism based on survey respondents where informational pamphlets released and distributed by Salem was selected as the most frequent way people learned about stormwater projects. Pamphlets will likely be distributed with utility bills.

Schedule: Outreach material will be distributed a minimum of once a year to at least 20% of each target audience.

Method to Determine Effectiveness: The stormwater survey will be re-distributed at the end of the Permit cycle to determine the effectiveness of the water quality issue. Results will be disseminated to determine if the public's knowledge of stormwater runoff and its impacts have increased.

Water Quality Issue No. 2: Education on dog waste impacts and pick-up

Rationale: Salem is in the Upper Roanoke River Watershed TMDL and has been assigned a waste load allocation for bacteria (E. coli). Selection of this issue is also consistent with survey respondents who ranked “too much bacteria in waterways” as their top stormwater pollution concern.

Target Audience: ±3,200 licensed dog owners (licensed pet databased sorted for dog owners)

Relevant Message: Inform dog owners about the effects of pet waste on water quality and encourage dog owners to pick up and properly dispose of pet waste.

Outreach Materials to Convey the Relevant Message: The message will be conveyed using brochures that will be mailed to pet owners. The City maintains a database of licensed pet owners.

Schedule: Brochures will be mailed on a yearly basis to at least 20% of the target audience.

Method to Determine Effectiveness: The stormwater survey will be re-distributed at the end of the Permit cycle to determine the effectiveness of the water quality issue. Results will be disseminated to determine if more pet owners are picking up after their pets.

Water Quality Issue No. 3: Prevention of Non-stormwater Discharges

Rationale: This issue was selected based on the results of the public survey that indicate 67% of respondents do not know that stormwater runoff is discharged directly to surface waters, as indicated in results in Appendix A.

Target Audience: This target audience includes the City’s entire population of ±25,000 people

Relevant Message: Information defining non-stormwater discharges and pathways to surface waters, as described in the City’s Illicit Discharge Detection and Elimination (IDDE) Manual and the City’s Ordinance that eliminates illicit discharges.

Outreach Materials to Convey the Relevant Message: Two types of materials will be utilized, including brochures and storm drain markers. Brochures that discuss the relevant message will be distributed to the target audience. Twenty storm drain markers will be installed annually as a supplemental outreach tool, with markers installed in “high potential” areas, as illustrated in the mapping generated in the City’s “Outfall Prioritization” report (Attachment 1 of the City’s Program Plan).

Schedule: Outreach material will be distributed a minimum of once a year to at least 20% of each target audience.

Method to Determine Effectiveness: The stormwater survey will be re-distributed at the end of the Permit cycle to determine the effectiveness of the water quality issue. Results will be disseminated to determine if the public’s knowledge of stormwater runoff and its impacts have increased. Effectiveness will also be based on achieving the targeted number of storm markers.

Survey Concerns	Ranked #1	Ranked #2	Ranked #3	Ranked #4	Ranked #5	Ranked #6	Ranked #7
Sediment in Waterways	244	240	284	345	293	176	91
Bacteria in Waterways	713	353	243	155	119	56	50
Dumped Motor Oil	516	369	323	210	137	65	63
Leaves in Gutters	86	40	75	85	181	382	789
People Washing Cars	72	44	122	200	392	473	328
Too much fertilizers	297	386	350	350	210	72	56
Not enough Education on Stormwater	690	113	140	191	183	173	331