

BACK RIVER AND BACK CREEK BACTERIAL TMDL ACTION PLAN

CITY OF POQUOSON, VIRGINIA

VAR 040024

May 12, 2025

In accordance with the requirements of the GENERAL VPDES PERMIT FOR DISCHARGES OF STORMWATER FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (9VAC25-890-40), the City of Poquoson is required to develop an action plan to address bacterial contamination in the Poquoson River. The Virginia Department of Environmental Quality established Total Maximum Daily Loads of Bacteria for Poquoson River in York County and the City of Poquoson, Virginia in 2018. A waste load allocation was also assigned to VDOT. It was approved by the EPA on February 9, 2018 and can be found on the DEQ's website at <https://www.deq.virginia.gov/water/water-quality/tmdl-development/approved-tmdls>

TMDL PROJECT NAME: Poquoson River and Back Creek Fecal Coliform TMDL

EPA APPROVAL DATE: 2/01/2018

PUBLIC COMMENTS ON THIS ACTION PLAN WILL BE ACCEPTED THURSDAY, APRIL 22, 2021 THROUGH SUNDAY, MAY 3, 2021. COMMENTS SHOULD BE EMAILED TO THE ENGINEERING DEPARTMENT AT sean.crawford@poquoson-va.gov Comments may also be submitted in writing to the Engineering Department at 500 City Hall Avenue, Poquoson, VA 23662.

WASTELOAD ALLOCATED TO THE PERMITTEE: The following table 4.2 is excerpted from the Poquoson River and Back Creek TMDL. Table 4.2 provides Wasteload allocations for all MS4s in the watershed. Poquoson's wasteload is 3.20E+11, a reduction of 61.78%.

**Table 4.2: Estimated Daily Wasteloads and Allowable Wasteloads for Fecal Coliform
by MS4 Permit¹**

Watershed	Permit Number	MS4 Permit Holder	Existing Load (Counts/day)	Wasteload Allocation (Counts/day)	Percent Reduction(%)²
Poquoson River	VAR040024	City of Poquoson	8.38E+11	3.20E+11	61.78
	VAR040028	York County	2.20E+12	1.24E+12	43.69
	VAR040115	VDOT	8.53E10	8.53E10	0.0
	SUM		3.04E+12	1.56E+12	48.68
Back Creek	VAR040028	York County	9.56E+10	8.52E+10	10.86
	VAR040115	VDOT ³	N/A	N/A	
	SUM		9.56E+10	8.52E+10	10.86

¹For MS4 permits, the permittee may address the TMDL WLAs for stormwater through the iterative implementation of programmatic BMPs.

²Percent reduction is based on averaged daily WLA and is computed as a reduction from the baseline existing load

³No VDOT managed highway

Note that because of the nature of the bacteria TMDL, any new or expanded permittee may discharge into the watershed at the bacteria water quality criteria without a TMDL revision.

SIGNIFICANT SOURCES OF BACTERIA DISCHARGING TO THE PERMITTEE'S MS4:

The following are sources of bacterial discharging to Poquoson's MS4 that are not covered under a separate permit. It should be noted that a significant majority of the length of the City of Poquoson's storm sewer system is tidal or tidally influenced. This means that the waters of the Poquoson River are transported by the tide into the City's storm sewer system. Tidal waters transport downstream pollutants, including pollutants from other localities and from the Plum Tree Island Federal Wildlife Refuge, into the City's MS4 system. This has a bearing on the water quality of the City's storm sewer system that is difficult if not impossible to quantify. It also means that flows through the drainage system could still contain bacteria even if the City were able to remove 100% of the upstream sources of bacteria from its service area.

The following significant sources have been identified:

- The Plum Tree Island Federal Wildlife Refuge: While the Refuge is outside the Poquoson service area, the TMDL assigns a portion of the wildlife refuge's bacterial runoff to the City's service area, citing tidal conveyance of the runoff into water bodies within the service area. While only a portion of the runoff pollution was assigned to the service area, the refuge's extremely large size still makes this loading significant. City property records indicate the refuge is 3,290 acres. This area drains to the Back and Poquoson Rivers. In comparison, the City of Poquoson's service area in the Poquoson River is a fraction of this amount. Obviously, the refuge is also a source of waterfowl that may on occasion wander into the City's MS4 service area. While DEQ was assigned a waste load allocation that is in part due to the refuge, the City cannot take any action to mitigate bacterial pollution from the property. A portion of Plum Tree was used as a bombing range during and prior to the 1950's. Public access to the refuge is prohibited, and the City of Poquoson has no role in its management. City workers cannot enter the property and cannot control any activities on the island. This is federally protected land.
- Itinerant waterfowl taking up residence in the developed portion of the City.

- Septic tank and sanitary sewer overflow waste. As commented on in stakeholders' advisory group meetings during the initial TMDL development, the water quality monitoring data for these reports was for a term of 2007 to 2014. The long-term water quality and bacterial levels in the watershed before, during and after this period show a continuing downward trend in bacteria in the waters receiving runoff from the Poquoson service area. This is due in large part to the City's major expansion of its sewer system in the first decade of the 2000's and its current municipal sewer find and fix program. The 2018 revision to the TMDL prior to EPA approval did consider and try to update data. However, more improvement in water quality monitoring data is expected in future years. The City is currently working on converting all septic to sewer. Currently in 2025 we have 35 houses on septic and our continuing efforts to convert all to sanitary sewer is on-going.
- Boat privy dumping, calculated based on the number of marinas is a contributing factor to bacteria in the watershed. While dumping occurs in open waters outside City limits, the load is attributed to the service area.
- Pet waste

BEST MANAGEMENT PRACTICES DESIGNED TO REDUCE BACTERIA IN ACCORDANCE WITH PARTS II B 4, B 5 AND B 6:

Best Management Practices (BMPs) are listed by significant source:

- Other source: Plum Tree Island Federal Wildlife Refuge wildlife: as noted above, this federally owned reserve is off limits to the City of Poquoson and its residents. City staff's past efforts to include the Refuge staff members in TMDL stakeholders' groups or discussions have not met with success. This is not a pollutant source that Poquoson has legal authority to address and we defer to the U.S. Fish and Wildlife Service.
- Birds (Waterfowl): The most significant concentration of itinerant waterfowl that have been observed in the City of Poquoson is the Canadian Goose flock at the South Lawson Park pond and on the fields. These birds no longer appear to be migratory and remain at the park year-round. The City of Poquoson has worked to find solutions to this goose infestation. Past efforts included "scarecrows" in the form of wooden silhouette cut outs and staff members returning daily to the park to chase the geese away. These have not helped and the goose population has grown as new goslings have hatched and taken up residence. The best measure for reducing and possibly eliminating itinerant geese is to work with the U.S. Fish and Wildlife Service on population control strategies. The City has initiated this effort and plans to continue this as needed. This effort will be expanded to include other City properties if a permanent goose population appears to be developing on those properties. In addition, the City will provide public education discouraging feeding waterfowl. Update 2025; the city has since seen a reduction in the Canadian Geese population at South Lawson. We have most recently as of 2024 added a public walking trail, a basketball court, and a gazebo. The City believes that the efforts of more people constantly at the park have pushed many of the geese out of the park area.
- Illicit discharges to the MS4: Human fecal coliform from septic tanks: Over 95% of the City's residences are connected to public sewer. Poquoson will maintain its proactive outreach program to septic tank owners, reminding them of the need for pump outs. In addition, the City will educate septic tank owners on how to

determine whether their septic system is failing. This campaign will be targeted on the approximately 30 homes out of almost 4000 still connected to septic tanks. The City will also continue its aggressive sewer system find and fix program performed as part of the regional Consent Order effort. Update 2025; the City is now converted roughly 99% of all homes to public sewer. This is a great accomplishment over the last seven (7) years.

- Other sources: Boat privy waste: Poquoson will continue to operate boat privy pump outs at two locations in the City. It will educate the public as to their availability by publishing locations on its blueway map. This map is included in Parks and Recreation brochures and on the City's website. The City will also include the location of privately owned pump outs on the map.
- Domestic Pets: Provide at minimum one sign and one pet waste station equipped with a disposal can and with pet waste bags at each of the City's parks and trails.

CALCULATIONS: The City of Poquoson does not have a TMDL for pollutants identified in Part II B 4, B 5 or B 6. Therefore, calculations and outreach strategies targeted at those pollutants are not required.

**SCHEDULE OF ANTICIPATED ACTION PLANNED FOR
IMPLEMENTATION DURING THE PERMIT TERM (Updated
2025 with our accomplishments/actions):**

- By December 31, 2021: Information will be posted on the City website and the Poquoson Cable TV channel on the proper disposal of pet waste and on NOT feeding waterfowl.
 - The City has continued to post on our public television network as well as our offices about the importance of disposing pet waste properly and not feeding waterfowl. We have added a sign at South Lawson Park telling citizen not to feed these animals.
- By December 31, 2021: Educational articles submitted to the Island Times, a City-wide magazine sent to every household in the Poquoson, on picking up after pets and not feeding waterfowl.
 - Island Times is still an on-going published article that is available to every citizen in the City of Poquoson. We continue to provide educational articles to the public.
- January 2022 through the end of Permit Year 5: Staff members will continue updating the public education outreach described above. Poquoson will continue to participate in the regional AskHRGreen educational campaign on pet waste.
 - The City of Poquoson is a major part of HR Green. We are active in the “scoop the poop” campaign to educated citizens on the importance of picking up pet waste.
- By October 31, 2023: Education on boat privy pump out facilities will be distributed through the blueways map and other sources targeted at boaters.
 - Our Parks and Rec department oversee our boat facilities and have educated through the appropriate channels to target boaters on this topic. This is to include mapping showing the waste pump out facilities as well as educational information on their use.
- By October 31, 2023: City staff members will establish and maintain a relationship with the US Fish and Wildlife Service and/or other government programs to actively reduce itinerant goose populations at South Lawson Park and other City properties as needed.
 - The City will continue to monitor South Lawson Park for geese and other fowl. As stated, the addition of a large

walking trail, a basketball court, and a picnic shelter have deterred a huge population of the lingering geese. We will work on other implementation techniques this permit cycle.

- Ongoing, continuing through the remainder of the permit term: Poquoson will continue to maintain a database of known septic tank owners in the City and will continue its septic tank pump out reminder outreach. The Poquoson Utilities Department will continue its find and fix program to identify and repair sewer system issues in an effort to minimize and eliminate wet weather overflows.
 - Our utility department has completed “slip-lining” of existing sewer infrastructure. This makes sure there are no leaks in the piping and adds an extra 50-60 years of service for these lines. The most recent completion is on Messick Road in the City. We have made drastic improvements on getting citizens on sewer and off septic as denoted. The last few remaining house we will tackle this cycle.
- By October 31, 2023: Poquoson staff members will have developed and distributed to septic tank owners an educational paper explaining how to identify failing septic tanks and needed corrective steps.
 - Our City Building Official has worked with homeowners in educating them on this topic.

SCHEDULE OF ANTICIPATED ACTION PLANNED FOR
IMPLEMENTATION DURING THE PERMIT TERM

May 2025- October 2028

- Continue our efforts of promoting not only through TV, but also social media the importance of proper pet waste disposal and Not feeding waterfowl. The City has adopted a new public park and will be adding pet waste stations throughout the park.
- The City of Poquoson will continue to use the Island Times and in addition add signage at the Annual Poquoson Seafood Festival regarding the importance of not feeding waterfowl and picking up pet waste. We will provide the opportunity for over 5,000 residents of the City that attend the event to gather information brochures as well as pet waste pick up bags.
- The City of Poquoson will continue to monitor boaters and marinas by providing information on pump out stations and BMPs.
- Poquoson will continue to monitor any geese in South Lawson Park and utilize the removal of any food sources. This may include adding additional, “no feeding the geese” signs.
- By 2028 the City of Poquoson should have every single resident converted over to the public sewer system and off septic. We will also continually upgrade our sewer infrastructure and sewer pump stations.

INCLUSION BY REFERENCE OF THIS ACTION PLAN AND ANNUAL PROGRESS REPORTING: The City's MS4 program plan includes the development and implementation of this action plan as required actions (see BMP SC). The City of Poquoson Annual Report for the MS 4 program, provided to DEQ by October 1st of each year will include a progress report of the previous year's actions and the planned actions for the upcoming permit year. Next year's annual report will include the finalization date and title for this action plan in the BMP SC status of compliance and next permit year's planned actions, as well as on the progress report.

COMMENTS: This action plan is being posted on the City's website beginning Monday, May 12, 2025. A fifteen-day comment period will follow, ending Tuesday, May 27, 2025. Following this comment period, the action plan will remain posted on line and the public will continue to be invited to provide comments to the Poquoson Engineering Department anytime.

END OF DOCUMENT