STAFFORD COUNTY PUBLIC SCHOOLS SPECIFIC TMDL ACTION PLAN – POTOMAC AND ANACOSTIA RIVERS PCB IMPAIRMENT

Revised April 2025

As a permittee under the Commonwealth of Virginia 2023-2028 General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4), Stafford County Public Schools (SCPS) is required to develop specific Total Maximum Daily Load (TMDL) Action Plans for pollutants identified in TMDL wasteload allocations as updates to the existing MS4 Program Plan.

For TMDLs approved by the Environmental Protection Agency (EPA) prior to July 1, 2018, permittees with associated wasteload allocations shall update the previously approved Local TMDL Action Plan no later than May 1, 2025 according to Section II.B.2.a of the 2023-2028 MS4 General Permit.

This Action Plan contains the required and suggested elements that should be included to ensure the TMDL Action Plan ("Action Plan") is approvable. This Action Plan should allow the Virginia Department of Environmental Quality (VDEQ) to verify that SCPS will be able to meet the requirements of the Local TMDL Special Condition by the end of the second permit cycle.

This Action Plan includes supporting material to show that the permittee has:

- (*2013-2018 General Permit Section IB2a)* developed a list of legal authorities applicable to reducing Polychlorinated Biphenyls (PCBs);
- (*2013-2018 General Permit Section IB2b)* developed an updated list of additional management practices, control techniques, system design and engineering methods beyond the Minimum Control Measures included in the Program Plan applicable to reducing PCBs;
- *(2013-2018 General Permit IB2c)* enhanced public education and employee training program to promote reduction of PCBs;
- *(2013-2018 General Permit IB2e)* assessed significant sources of PCBs from facilities of concern;
- *(2018-2023 General Permit II6a)* developed an inventory of potentially significant sources of PCBs that drain into the MS4, including a location of the potential source, whether the source is from legacy or current site activities, and a description of any measures implemented to prevent discharge of PCBs from the site.
- *(2018-2023 General Permit IIB3b*) provided the EPA approval date for the PCB TMDL;
- *(2018-2023 General Permit IIB3c*) provided the wasteload allocation of PCBs;
- *(2018-2023 General Permit IIB3e-f)* assessed and documented the Best Management Practices (BMPs) designed to reduce the PCBs; and
- *(2018-2023 General Permit IIB3h)* developed an updated schedule of anticipated actions to reduce bacteria during this permit term.
- *(2023-2028 General Permit Section II.B.2.a 1)* Evaluate the results achieved by the previous action plan.
- *(2023-2028 General Permit Section II.B.2.a 2)* Any adaptive management strategies incorporated into updated action plans based on action plan evaluation.

The submitted Action Plan becomes effective and enforceable 90 days after the date received by the VDEQ unless specifically denied in writing by the Department in accordance with Section I.B.1.c of the 2013-2018 General Permit.

Stafford County Public Schools (SCPS) currently operates under the Virginia MS4 General Permit (#VAR040071) to address stormwater discharges from its regulated properties. The components of this MS4 program, including the methods used to fulfill the six minimum control measures (MCM #1 – 6), are detailed in the SCPS MS4 Program Plan (Apex, May 2020).

The Final Report dated September 28, 2007 with minor revisions dated October 31, 2007 for *Total Maximum Daily Loads of Polychlorinated Biphenyls (PCBs) for Tidal Portions of the Potomac and Anacostia Rivers in the District of Columbia, Maryland, and Virginia* assigned an aggregate waste load allocation (WLA) summarized below in **Table 1** for Stafford County Public Schools (Permit No. VAR040071), Stafford County (VAR040056), and Fredericksburg Virginia Department of Transportation (VDOT) Urban Area – Stafford County (VAR040061) for PCB impairment. The EPA's TMDL decision rationale is dated October 31, 2007 (*Decision Rationale Total Maximum Daily Loads for Polychlorinated Biphenyls (PCBs) Tidal Potomac & Anacostia River Watershed in the District of Columbia, Maryland, and Virginia*).

Table1. Summary of WLA for SCPS Properties

Aggregate MS4s	Watershed	WLA: PCBs (mg/day)	WLA: PCBs (g/yr)
Stafford County Public Schools Stafford County Fredericksburg VDOT Urban Area – Stafford County	Aquia Creek	642	5.98
	Chopawamsic Creek	143	
	Potomac Creek	93.5	
	Potomac River Lower	254	
	Potomac River Middle	401	

1. Current Program and Legal Authority

(*2013-2018 General Permit Section I.B.2.a.(1)*) *Develop and maintain a list of legal authorities such as ordinances, state and other permits, orders, specific contract language, and interjurisdictional agreements applicable to reducing the pollutant identified in each applicable WLA.*

As a school system, SCPS does not have regulatory authority and must rely on Stafford County to develop and enforce legal authorities such as ordinances, permits or orders. The primary tool for preventing the discharge of PCBs to the storm sewer system within Stafford County is Chapter 21.5, Article II of the Stafford County Code, the Stafford County Stormwater Pollution and Illicit Discharge Ordinance.

Section (a) of this ordinance states "It shall be unlawful to cause or allow illicit discharges into the county's stormwater system; discharge materials other than stormwater into the stormwater system by spills, dumping, or disposal without a Virginia Pollution Discharge Elimination System (VPDES) permit; cause or allow industrial discharges into the stormwater system without a VPDES permit; or violate any condition or provision of this article or any permit granted for stormwater discharges. Section (c) of this ordinance states "In the event that any of the activities listed in subsection (b) above are found to cause sewage, industrial wastes or other wastes to be discharged into the system, the director shall so notify the person performing such activities, and shall order that such activities be stopped or conducted in a manner to avoid the discharge or sewage, industrial wastes or other wastes into a storm sewer system. The failure to comply with any such order shall constitute a violation of the provisions of this article."

On September 17, 2015, SCPS formally requested a collaborative effort with Stafford County and Fredericksburg VDOT Urban Area – Stafford County to meet the PCB WLA in Aquia Creek.

2. Significant Source Assessment and Inventory

(2018-2023 General Permit Section II.B.3.d) Identification of the significant sources of the pollutants of concern discharging to the permittee's MS4 and that are not covered under a separate VPDES permit. For the purposes of this requirement, a significant source of pollutants means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL.

A. Assessment

For the purposes of this assessment, a significant source of pollutant(s) from a facility of concern means a discharge where the expected pollutant loading is greater than the average pollutant loading for the land use identified in the TMDL.

PCBs can be released into the environment through release events such as leaks from PCB containing equipment/materials or illegal/ improper disposal. Stormwater runoff can transport PCB releases through the environment. Stormwater discharges from SCPS properties in this watershed ultimately discharge into the Potomac River.

Because PCBs are primarily a legacy pollutant, with most uses banned since the 1970s, SCPS schools and sites constructed after the 1970s are unlikely to be sources of PCB pollutants. The most effective means to identify, reduce, and eliminate residual PCBs is to assess and remediate sources of PCBs at SCPS properties constructed prior to 1979 in the impacted watershed.

B. Inventory

For the purposes of this Action Plan, SCPS properties within the Aquia Creek watershed constructed prior to 1970 are considered potential significant PCB sources. listed in **Table 2** below. All potential sources are from legacy activities. A description of measures implemented to prevent exposure to stormwater and the discharge of PCBs from the site can be found in Section 3 of this Action Plan. Based on original construction dates of the remaining SCPS facilities within the impacted watersheds, no other facilities are considered potential significant PCB sources.

Table-2. Potential Significant PCB Sources

Watershed	HUC	Schools	Constructed
Aquia Creek	PL57	Stafford Elementary	1968
		Anne Moncure Elementary	1966
		Alvin York Bandy Admin Complex	1900

According to a Building Condition Assessment conducted in the spring of 2007, one pad-mounted and two pole-mounted transformers potentially containing PCBs are located at the Alvin York Bandy Administrative Complex. These transformers are located on SCPS property, but are the property of the electrical service provider (Dominion Power). To the best of SCPS' knowledge, these transformers have not been sampled to confirm or deny the presence of PCB contamination. The equipment is not labeled "Non-PCB". Given the original construction date of the Alvin York Bandy Complex (1900), it is possible that oil in the equipment may contain PCBs.

3. Means and Methods to Meet the Wasteload Allocation

(2018-2023 General Permit Section II.3.e) BMPs designed to reduce the pollutant of concern.

A. Implemented Means and Methods

This section describes the control techniques that have been implemented thus far.

In May 2010, air sampling was conducted at Stafford Elementary, Anne Moncure Elementary, and the Alvin York Bandy Administrative Complex. Samples from all three properties indicated concentrations of PCBs above EPA air quality standards. PCB-containing building materials included caulking materials from windows and surrounding frames, stools, sills, and brick, door frames and surrounding brick or block, interior soffits and bulkheads, and unit ventilators.

Stafford Elementary was renovated in 2013, including third-party PCB abatement. Following abatement, visual clearance was performed and wipe clearance samples were collected. Containerized waste was transported by a licensed hauler to an EPA-approved incineration facility. All identified PCB sources have been removed from this facility.

The Alvin York Bandy Administrative Complex was renovated in 1998 and 2000, including third-party PCB abatement. Following abatement, visual clearance was performed and wipe clearance samples were collected. Containerized waste was transported by a licensed hauler to an EPA-approved incineration facility. All identified PCB sources have been removed from this facility.

Anne Moncure Elementary has been decommissioned and associated activity was moved to a replacement school on a new site in 2019. When the new elementary school was completed, SCPS declared the existing school “surplus” and plans to turned the facility at 75 Moncure Lane over to Stafford County per an approved memorandum of understanding in 2020. This facility remains within the Aquia Creek watershed. SCPS will recommended PCB abatement as part of any renovations undertaken by Stafford County at this time.

The three unlabeled transformers located at the Alvin York Bandy Administrative Complex were added to regular quarterly grounds inspections to ensure any leaks or spills of potentially PCB-containing oils are identified and addressed in a timely fashion. If a release is identified, it will be flagged in the SCPS work-order system for an immediate alert to the electrical service provider (Dominion Power). If a release were to occur, Dominion Power is responsible for conducting response procedures in accordance with state and federal regulatory requirements.

4. Education and Outreach

(2018-2023 General Permit Section II.B.3.g) An outreach strategy to enhance the public's education (including employees) on methods to eliminate and reduce discharges of the pollutant.

A. Public Education & Outreach

SCPS incorporates education of the effects of human activity on water quality and how we as humans affect it into public science education courses at multiple grade levels. Through the Virginia Standards of Learning (SOLs), students learn the importance of protecting and maintaining our water resources and how it affects their watershed. SCPS implements all Virginia SOLs and specifically incorporates water quality issues into grade 4 and 6 earth science courses.

Fourth grade students specifically cover water resources and the Chesapeake Bay watershed under Virginia Standard 4.9. Students conduct a laboratory lesson in which they design water filters, discuss human sources of pollution and examine the impacts of non-point source pollution on the Chesapeake Bay, including electric generation facilities. The students create and interpret a model of a watershed and evaluate the statement: "We all live downstream." Students differentiate among positive and negative influences of human activity on ecosystems.

Sixth grade students specifically cover non-point source pollutants, and transport in runoff under Virginia Standard 6.5. Water quality testing laboratory classes discuss bioaccumulation and biomagnification of pollutants such as PCBs.

B. Employee Training

Legacy sources of PCB contamination have been incorporated into annual employee training programs. Training will address identification, risk factors, abatement, and significant sources within the SCPS system.

5. TMDL Action Plan Evaluation

(2013-2018 General Permit Section I.B.2.e) Develop and implement a method to assess TMDL Action Plans for their effectiveness in reducing the pollutants identified in the WLAs.

The non-structural BMPs and methods included in this action plan are not associated with an assigned load reduction efficiency. Therefore, SCPS will evaluate the effectiveness of this action plan by annually reviewing the measures outlined in Sections 3 and 4 for completion.

Facility Assessment: All SCPS sites with potentially significant sources of PCBs have been renovated or are planned to be released to the county in 2020 If new sources of PCBs are discovered, SCPS will notify the VDEQ in writing within 30 days of discovery as required by Section II.B.6.b of the General Permit.

Education and Outreach: A primary goal of this TMDL Action Plan is to provide training to targeted staff to ensure a working understanding of the hazards, potential sources, and internal response actions expected if a PCB source or release is identified. SCPS will conduct and document annual training activities. Training material and sign-in sheets (date of training and list of attending employees) will be maintained for each training event. Annual training will be documented in corresponding MS4 Annual Reports. If a PCB source or release is identified, a description of response actions will include an assessment of the effectiveness of employee training. SCPS will include metrics for attendance and involvement in the educational programs outlined in Section 4 in the Annual Report.

Evaluation of the results achieved by the previous action plan

(2023-2028 General Permit Section II.B.2.a 1) Evaluate the results achieved by the previous action plan.

An evaluation of the results achieved by the previous action plan indicate that SCPS has continued to monitor for the presence of PCBs. They have also continued their public education and employee training on the topic of PCBs. There have been no new sources of PCBs identified, and all previous sources discovered have been removed through abatement. This evaluation indicates that the action plan has been successful in achieving the results laid out in previous action plans.

(2023-2028 General Permit Section II.B.2.a 2) Any adaptive management strategies incorporated into updated action plans based on action plan evaluation.

No new adaptive management strategies are to be incorporated into the updated action plan based on the evaluation of the action plan.

6. Annual Reporting

(2023-2028 General Permit Section I.D.5) *Annual reporting requirements.*

SCPS will submit the revised local TMDL Action Plan May 1, 2025 and with the Year 2 Annual Report in accordance with the associated schedule identified in the General Permit.

In proceeding Annual Reports, SCPS will provide a report on the implementation of the TMDL Action Plan and associated evaluation including the results of any monitoring conducted as part of the evaluation.