State of Vermont PCBs Testing Program in Vermont Schools an Overview

This overview is meant to cover the timeframe from the passage of the legislative mandate to conduct indoor air testing in Vermont schools (July 2021) through to January 2026.

High level elements of the PCB program are provided below and expanded upon within the document.

- Polychlorinated biphenyls (PCBs) are human-made chemicals that were commonly used in building materials and electrical equipment built or manufactured before 1980. Monsanto was the sole manufacturer of PCBs in the United States. The U.S. Environmental Protection Agency (EPA) banned manufacturing and certain uses of PCBs in 1979.
- PCBs can cause serious health problems.
    - The potential for health effects from PCBs, as with other chemicals, depends on how much, how often, and how long someone is exposed to them. Numerous studies in both humans and animals have shown that exposure to.
    - PCBs can affect the nervous, immune, reproductive and endocrine (hormone) systems.
    - PCBs are also classified as human carcinogens. This means that exposure to PCBs can cause cancer in humans.
- High levels of PCBs in the indoor air of schools represent the biggest exposure to PCBs for students and staff.
    - **If the level in air is the same in a school and a home, then the risk is the same. However, studies have shown that high levels of PCBs in the indoor air of schools represent the biggest exposure for students and staff. In other words, when PCBs are present at high levels this is likely a bigger source of PCB exposure than diet or background.**
    - PCB levels in the indoor air of schools should be kept as low as possible
- Schools renovated or built before 1980 have a high likelihood of PCBs being present in their building materials and the indoor air.

August 2020 BHS PCB impacts were identified.

- 2021, Act 74 required all public and approved and recognized independent schools built or renovated before 1980 to test their indoor air for PCBs. The original Act passed in 2021 required that all testing be completed by July 1, 2024. This date was extended to 2025 and now to 2027.

- The Vermont Department of Environmental Conservation (DEC) has the authority to require schools to address releases of PCBs to indoor air and reduce concentrations to health protective levels established by the Vermont Department of Health.
- Under Act 178, Section 3, $13.5M was set aside for funding the investigation, testing, assessment, remediation and removal of PCBs in schools statewide. $16M was set

aside for Burlington High School (reminder that this money was used for disposal of PCBs).

- There is no question that PCBs are toxic chemicals.
- There is no question that it is time-consuming and costly to remove PCBs from schools.
- The science on these chemicals is clear; PCBs pose long-lasting health risks to students and staff and the work under this sampling program helps to ensure that PCBs can be reduced and removed in Vermont schools.

2025-2026

- There are 328 schools in Vermont that were built or renovated before 1980.
    - 183 Schools have had inventories (56%)
    - 157 Schools have been sampled (48%)
    - 46 Schools have PCBs detected >SAL (31%)
    - 145 Schools need inventories
    - 171 Schools need IAS sampling

- General budget appropriated $9.5M to DEC to conduct testing and remediation at schools.
    - Proposed 6 schools to receive these funds to help implement cleanup planning/cleanup

school	Sum of approvals	note
Bellows Falls Union High School	$ 2,144,610.29	School preforming ICAP on fireproofing columns in school. Most recent sampling had PCB concentrations below SAL.
Green Mountain Union High School	$ 84,247.50	ECAA and CAP preparation
Hartford High School	$ 419,812.66	ECCA/CAP Preparation
North Country Union High School	$ 1,104,393	See below

Invoices and estimates for tent damage reclamation work	33,000.00
2025 Vapor Barrier/Soil Interim Measure Work Plan Development, Cost Approval	12,902.00
Supplemental Indoor Air Sampling Work Plan, Cost Approval	15,771.00
Univent filter replacement, room cleanings, and HVAC cleaning.	208,602.00
Work Plan Development, Soil Sampling and Reporting	94,034.00
2026 Maintenance & Monitoring Work Plan	540,423.00
Schoolwide ECAA & CAP development	66,676.00
Soil Barrier workplan	132,985.00

Soar Learning Center	$	207,536.96	ECCA/CAP and sampling?
Twin Valley Elementary	$	1,579,996.73	Schoolwide ECAA/CAP in development. School completed ICAP on gym, gym stage and boiler room resulting in decreased indoor air concentrations. Working on library ICAP. Latest gym change is a decrease by 134 ng/m3 (200-64 ng/m3). Greatest gym change is a decrease by 986 ng/m3 (1,050 -64 ng/m3). Latest Mezzanine results are an increase in the gentleman side of 110 ng/m3 (440 - 550 ng/m3) and decrease in the ladies side of 140 ng/m3 (350 - 210 ng/m3). The ventilation system was not running in the latest mezzanine results. We are waiting on results with the ventilation system running. Overall, there's been a decrease in the gentleman's side 2,350 ng/m3 (2900 - 550 ng/m3) and lades 2,990 ng/m3 (3,200 - 210 ng/m3)
Sum	$	5,670,597.14	
Remaining amount	$	3,829,402.86	

Several Schools (12) have continued to conduct work:

school	status
Berkshire Elementary	Additional substrate sampling
Charleston Elementary School	School to remove PCB contaminated oil in compressor in boiler room.

Enosburg Falls Elementary School	Results after corrective action are non detect. SMAC letter drafted and with Program Manager for review.
Fairfield Center School	PCB containing compressor identified. Waiting on workplan for removal and retesting
Hardwick Elementary	Interim CAP Completed. Entering Long Term Monitoring.
Leland and Gray	Additional substrate sampling
Newbrook Elementary	Indoor air sampled. PCBs detected, but below 75% of the SAL. No Further Action memo needed to file to folder.
Oak Grove	Chlordane contamination, using other state funds
Patricia A. Hannaford Career Center	School debating entering quarterly monitoring
St Albans Town Education Center	Quarterly monitoring
St. Albans City School	CAP approved and 30 day comment period complete. Work scheduled for summer 2026.
White River Elementary School	Indoor air sampled. PCBs detected, but below 25% of the SAL)

Several schools that are closing are being redeveloped for other uses – brownfields (7)

school	status
Former Gilman School	Phase II ESA completed which involved materials sampling. ECAA and CAP to follow.
Former Rochester High School	Indoor sampling results were within 25% of the Per-K SAL, Monitoring may be required depending on future occupancy. COC issued without monitoring since this is currently not operating as a school
Ben HI	PCBs detected and being remediated
Windham Elementary	No sampling yet
Fay Honey Knopp (Rutland)	Howard Center
Park Street School -Springfield	Black River Innovation Campus
Former Roxbury Village School	No PCBs were found. Testing paid for by town. Currently used by the local afterschool program.

Summary of all Schools where a SAL exceedance was identified

school	**current status**
Newport Elementary	Classroom work determined classes are below SAL, ancillary spaces above Pre-K SAL, sources not able to be identified. Work is on hold for now due to funding.
Bellows Falls Middle School	No work due to lack of funding. Materials sampling is next.
Bellows Falls Union High School	Schoolwide ECAA/CAP in development. School preforming ICAP on fireproofing columns in school
Berkshire Elementary	Additional substrate sampling is needed. Being funded privately
Brighton Elementary School	PCB containing light blasts removed. After 5 rounds of Indoor Air sampling there are still slight exceedances in some spaces. Sampling paused due to funding.
Browns River School	No work due to lack of funding. Materials sampling is next.
Cabot	ECAA received September 2023 and is under DEC review. No work due to lack of funding.
Camels Hump Middle School	No work due to lack of funding. Materials sampling is next.
Canaan Schools	Materials sampling WP in progress and not approved due to funding.
Chamberlin School	No work due to lack of funding. Materials sampling is next.
Champlain Elementary	No work due to lack of funding. ECAA / Corrective Action is next.
Charleston Elementary School	School to remove PCB contaminated oil in compressor in boiler room. Being funded privately
Charlotte Central School	Waiting on renovation of ancillary space for remaining PCB corrective action
Clarendon Elementary	Initial materials sampling conducted in 2024. Further work paused due to lack of funding.
Concord Graded	No work due to lack of funding. ECAA / Corrective Action is next.

Danville	Additional characterization completed and interim monitoring is ongoing. Corrective action planning is ongoing. Further work paused due to lack of funding
Derby Elementary	Indoor air sampling found some PCB IA exceedances of SAL in boiler room. Glazing in windows and caulk around windows identified to have PCBs in them. Work to remediate boiler room on hold for now due to funding.
Dover Elementary	Materials sampling completed in summer 2025 and quarterly indoor air monitoring underway in Fall 2025. ECAA and CAP development paused due to lack of funding.
Dummerston School	No work due to lack of funding. Additional materials sampling and ECAA development next.
Enosburgh	Ready for SMAC
Fairfield Center School	PCB containing compressor identified. Waiting on workplan for removal and retesting
Green Mountain Union High School	An initial site investigation to identify PCBs was completed Fall 2023. Supplemental site investigation conducted and carbon filter deployed. School wide ECAA review underway.
Hardwick Elementary	Interim CAP Completed. Entering Long Term Monitoring. Previous concentrations ranged from 32 - 96 ng/m3. Current concentrations after post remediation range from 30 -69 ng/m3
Hartford High School and Technical Center	Entering ECAA/CAP Development. Quarterly monitoring underway.
Hyde Park Elementary	Latest report from 2024 recommends quarterly monitoring. Paused due to lack of funds.
Integrated Arts Academy	No retesting not scheduled since renovation. Next step is confirmation sampling.
Leland and Gray	Additional substrate sampling completed and reported. ECAA and CAP development paused due to lack of funds.
Lunenburg/Gilman School	Phase II ESA completed which involved materials sampling. ECAA and CAP to follow. This is being funded through DEC’s brownfields/PCF and the RPC

Marlboro Elementary	No work due to lack of funding. Materials sampling is next.
Newbrook Elementary	NFAP
Middlebury Union High School	No work due to lack of funding. Materials sampling is next. School debating entering quarterly monitoring
North Country Union High School	ICAP complete and indoor air filtration running. Long Term maintenance and monitoring approved for 2026. Soil cap work planned for summer 2026. Room 378 work plan under review. ECAA and CAP development underway.
Oak Grove	Waiting on latest results for DEC review. Conducting work related to chlordane
Pacem School	SMAC letter to be drafted
Patricia A. Hannaford Career Center	Initial and retesting results after HVAC upgrades indicate SAL exceedances in one space and several within 25% of the SAL. School debating retesting and quarterly monitoring.
Poultney Elementary	ECAA development delayed due to lack of funding.
Poultney High School	Quarterly monitoring underway and indoor air filter deployed. Material characterization and next steps paused due to lack of funding.
Proctor Elementary	Initial source investigation completed. Supplemental source investigation and ECAA and CAP development when funding allows.
Rutland Town Elementary	ICAP completed. No funding available for schoolwide ECAA and CAP development. Initial results ranged from 40 – 170 ng/m3. Current retested results from Jan 2025 range from 55 – 86 ng/m3.
Saint Paul's School	No work due to lack of funding. ECAA/CAP development is next.
Sheldon Elementary	Materials characterization work plan on hold due to lack of funding
Soar Learning Center	Additional materials sampling, ECAA and CAP development
South Burlington High School	No work due to lack of funding. Materials sampling is next. SAL Exceedance of 100ng/m3 in an ancillary space.

St Albans City School	CAP approved and 30 day comment period complete. Work scheduled for summer 2026 includes removal of 180 linear feet of window glazing, 36 linear feet of window caulk and HVAC cleaning
St Albans Town Education Center	Quarterly monitoring
Twin Valley Elementary	Schoolwide ECAA/CAP in development. School completed ICAP on gym, gym stage and boiler room resulting in decreased indoor air concentrations. Working on library ICAP. Latest gym change is a decrease by 134 ng/m3 (200-64 ng/m3). Greatest gym change is a decrease by 986 ng/m3 (1,050 -64 ng/m3). Latest Mezzanine results are an increase in the gentleman side of 110 ng/m3 (440 - 550 ng/m3) and decrease in the ladies side of 140 ng/m3 (350 - 210 ng/m3). The ventilation system was not running in the latest mezzanine results. We are waiting on results with the ventilation system running. Overall, there's been a decrease in the gentleman's side 2,350 ng/m3 (2900 - 550 ng/m3) and lades 2,990 ng/m3 (3,200 - 210 ng/m3)
Twin Valley Middle High School	No work due to lack of funding. Materials sampling is next.
Twinfield	Second round of site investigation waiting on funding. Interim monitoring on a quarterly basis paused due to funding.
U32	No work due to lack of funding. Additional materials sampling is next.
Wallingford Village School	Material sampling indicates elevated levels of PCBs in window caulk. Air filter systems installed at school. Follow-up work on hold due to funding.
Warren Elementary	Waiting on funding for retest of corrective action to understand seasonal trends.
Williston Schools	No work due to lack of funding. Materials sampling is next.

- Process of PCB sampling – inventory, indoor air sampling, source identification
- School action levels (SAL) are based on the amount PCBs found in the indoor air at a school. The State of Vermont has established three different action levels for schools, depending on the age of the students. Younger children tend to have more exposure to

PCBs from their diet, so the levels for younger children are more stringent than those for older children and staff. The three school action levels are:

- 30 nanograms per cubic meter (ng/m3) for Pre-K
- 60 ng/m3 for kindergarten to 6th grade
- 100 ng/m3 for 7th grade to adult

- The immediate action levels (IAL) are three times higher than the school action levels. Since these levels pose a greater exposure risk, no room at or above these levels will be able to be used. The three immediate action levels are:
  - 90 nanograms per cubic meter (ng/m3) for Pre-K
  - 180 ng/m3 for kindergarten to 6th grade
  - 300 ng/m3 for 7th grade to adult