

Reducing airborne Coronavirus transmission through improved IAQ

Environmental Services Group, Facilities Department

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Providing a healthy and comfortable learning environment for students and staff is important to Saint Paul Public Schools. Maintaining good Indoor Air Quality (IAQ) across the district has always been a high priority of the District and is even more so during the current Covid-19 pandemic.

IAQ MANAGEMENT PLAN

For years the District has established an [IAQ Management Plan](#) that monitors and improves the air quality in all SPPS buildings. The plan aligns with the Environmental Protection Agency (EPA) and its *IAQ Tools for Schools Program* and is managed by an IAQ Team that reviews the plan annually.

The objectives of this IAQ Management Plan are to:

- Reduce the levels of indoor air pollutants through preventive measures such as routine maintenance activities, periodic building evaluations and inspections, and IAQ-specific policies.
- Provide and maintain adequate air exchanges by maintaining ventilation equipment.
- Respond to IAQ-related concerns and problems in a thorough and prompt manner, through investigation, documentation, and effective communication.

INDOOR AIR QUALITY ASSESSMENTS

As part of the IAQ Management Plan, all schools and administrative buildings within the District are routinely surveyed to identify IAQ-related issues. SPPS works with the Institute for Environmental Assessment (IEA) to conduct the surveys. The district-wide surveys collect information about water damage, mold, mildew, paint, pests, odors, chemicals, and exhaust/HVAC equipment. [Measurements](#) are taken to document carbon dioxide, carbon monoxide, temperature, and relative humidity in all spaces. Sampling is conducted while spaces are occupied to ensure accurate measurements. Addressing the issues that have been identified through the IAQ survey process is a top priority to ensure spaces are safe for staff and students.

TESTING, ADJUSTING, AND BALANCING (TAB) PROGRAM

SPPS has a dedicated crew of sheet metal workers that are certified by the National Environmental Balancing Bureau. The TAB crew balances the airflows between rooms to make sure all spaces are receiving the correct amount of ventilation. The crew has been doing this important work since 2016. This crew also resolves issues identified during the IAQ surveys to ensure the air handling systems are operating properly.

STRATEGIES TO REDUCE AIRBORNE TRANSMISSION OF THE CORONAVIRUS

In response to the Covid-19 pandemic, the District has implemented the following additional strategies to help mitigate the airborne spread of the Coronavirus. These strategies are recommended by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), OSHA, WHO, and the EPA:

- Filtration
 - The filtration in all air handling systems was increased to a baseline Minimum Efficiency Reporting Value (MERV) of at least 11. This includes individual classroom unit ventilators.
 - Higher level filtration (MERV 13) filters were installed in air handlers where possible.
 - If past IAQ Assessment records indicate a room would benefit from additional filtration, those specific rooms were provided with a HEPA air purifier. This is an added precaution since those locations have already been addressed by the TAB crew since the assessment was conducted.
- Ventilation
 - The programming for the air handlers was adjusted to run extended hours to pre-flush the buildings before occupancy and post-flush the buildings at the end of each weekday.
 - The air handlers have been programmed to bring in extra outside air when outdoor conditions allow and when community spread of Covid-19 is high.

If you have questions or concerns about air quality, please contact the District's Indoor Air Quality Coordinator, Angela Vreeland, at angela.vreeland@spps.org.