

## Coalition Goal # 1: Improve the Public's Right to Know & Right to Act.

### District's Response:

- The GreenFutures' Healthy Schools committee meeting monthly to engage District staff and partners from The Food Trust, Youth United for Change, Philadelphia Federation of Teachers Health and Welfare Fund & Union and the Healthy Schools Network, in addition to others. Approaches and data about drinking water testing for lead, building assessment reports for environmental health conditions, and asthma-trigger assessment data are shared with the committee at every meeting, and feedback is sought to implement the 25 specific actions that are listed in the GreenFutures plan for Healthy Schools, Healthy Living. The Target for this focus area is that EVERY school will be healthy.
- All District water testing data is posted for public view at [philasd.org/waterresults](http://philasd.org/waterresults).
- The District's Indoor Environmental Quality program is posted for public view at: <https://greenfutures.philasd.org/healthy-schools/>
- The District's Facility Condition Assessment report for every school is posted for public view at: <http://webgui.phila.k12.pa.us/offices/c/capitalprojects/programs--services/fca>.
- The PFT H&WF's environmental consultant engages directly with the District virtually on a daily basis at site visits and at meetings where environmental health data and approaches are shared. There have been over 200 hours of documented engagement directly between the District and the PFT's environmental consultant over the past three months. Weekly indoor environmental quality reports are shared with the PFT's consultant.
- Every school has an Asbestos Management Plan available for public view that provides the location and type of asbestos present at the school, as well as abatement and air monitoring activities at the school.

## Coalition Goal # 2: Establish the "ABCs" of school health

### District's Response:

#### Summary:

The District is presently implementing the US Environmental Protection Agency's Indoor Air Quality Tools for Schools program as a best management practice and standard for assessing the environmental health conditions in schools. The District's Indoor Environmental Quality program includes assessing every school twice per year for the parameters set forth in the EPA's TfS approach. The District has been named an EPA "School Indoor Air Quality Champion" and is cited as a mentoring resource for the other school districts across the nation because of the District's environmental health program. See list of EPA IAQ Champion School Districts at: <https://www.epa.gov/iaq-schools/find-local-indoor-air-quality-champions>.

#### Details:

The School District of Philadelphia (School District) is committed to providing students and staff with well resourced, safe, healthy, clean and comfortable learning and working environments. To support this commitment, the School District has developed an Indoor Environmental Quality (IEQ) Program. This program is administered by the School District's Office of Environmental Management & Services (OEMS). OEMS is responsible for identifying, correcting and preventing IEQ issues such as asthma triggers and the criteria set forth in the EPA's IAQ Tools for Schools program including pests, dampness and mold, point sources of dust and chemicals and ventilation. Through the District's IEQ program, IEQ

screening inspections are conducted two times per year in tandem with other regulatory required inspections, also, by conducting planned comprehensive proactive inspections, and by conducting reactive or complaint driven inspections. IEQ issues are resolved through an IEQ Dashboard process. The District also has an Asthma Management Program that focuses on student health and environmental asthma trigger management. This program is comprised of a two pronged approach of clinical management of student health at school, and environmental management of asthma triggers in schools. The District's GreenFutures sustainability plan, "Healthy Schools, Healthy Living," section calls for the District to: "Provide every school with their facility's Indoor IEQ Dashboard over 5 years," and to "Develop a healthy school building indicators rubric with metrics in 2016." The School District also has established an Integrated Pest Management program that addresses pests including bed bugs using a pesticide-free approach for most pests. In some cases, a food services, school custodial staff, teachers and environmental services staff coordinated effort is needed to resolve pest issues. We recently completed a door-sweep inspection and installation project as per the guidance of partners from the Pennsylvania Integrated Pest Management Program at Pennsylvania State University. Almost 1,000 door sweeps were installed to the exterior doors of our schools to prevent pests from entering buildings. This step allows for an asthma trigger (rodents and other pests) to be reduced in our schools.

Asthma-focused proactive inspections are conducted in high asthma prevalent schools. These are defined as schools with a high (>20%) percentage of students who use their emergency asthma medication while at school in comparison to the overall school population.

The goals of the District's IEQ program are to:

- Identify and prevent IEQ issues in schools.
- Maintain healthy school indoor environments that are conducive to teaching and learning.
- Evaluate IEQ concerns and implement corrective actions in a comprehensive and timely fashion.
- Use an IEQ reporting mechanism so that issues are tracked to completion.
- Provide building occupants and District staff with tools, training and resources to prevent, identify and solve IEQ problems at the school-based level as much as possible.

An Industrial Hygienist conducts both proactive and reactive IEQ assessments. The Industrial Hygienist communicates with facilities staff, school principal and teachers while on site during assessments. A detailed and point by point report with a photo log of environmental conditions is developed from the assessment. This is called the IEQ Dashboard Report. The report's findings are categorized into the US EPA's Tools for Schools indicators of Mold/Dampness, Ventilation, General Cleanliness, Point Source and Pest Management. Corrective actions range from emergency response procedures after water intrusion, smoke infiltration, oil spills and other odorous releases, to specifications for mold remediation, decluttering and removing air fresheners and other point sources from classrooms. IEQ corrective actions are entered into the District's facilities management work order system and assigned to responsible parties. OEMS works with responsible parties to track corrective actions to completion. For IEQ issues that are multifaceted and involve a number of responsible parties, a school based IEQ Team is formed to discuss and track IEQ Dashboard corrective actions to completion. The IEQ team's core members may consist of Maintenance staff, Operations staff, OEMS, Capital Programs, Food Services, Integrated Pest Management (IPM), School Principals, and other District departments depending upon the situation.

In addition to comprehensive IEQ inspections conducted by an Industrial Hygienist, IEQ screenings are included in US EPA mandated Asbestos Hazard Emergency Response Act (AHERA) inspections. Because AHERA inspections are required by law, and conducted twice per year at every school, the District incorporates inspection parameters for visible mold, rodent droppings and paint/plaster dust and deterioration. These observations are reported by AHERA inspectors in addition to their mandated purpose of reporting asbestos damage. As a result of this screening program, dozens of instances of active water leaks, mold and other issues have been identified and corrected. For larger, more costly facility repairs, the District's Capital improvement plan for the next five years is taking into consideration data collected by OEMS. This includes active roofing leaks, paint and plaster damage from chronic water intrusion and a multitude of other building envelope and ventilation issues. With this data, the District is incorporating IEQ issues that impact health into funding for long term fixes.

An IEQ Dashboard Report is generated for every reactive and comprehensive inspection, with findings that need to be corrected. The report contains very specific details about the location of, quantity of and type of IEQ deficiencies. The report is used as a reporting and tracking tool for corrective action implementation. IEQ Dashboard corrective actions are added to the District's Maintenance Work Order System. This allows for the proper assignment and tracking to completion. IEQ related Work Orders receive a priority ranking to ensure that the work is completed in a timely fashion. Mold, asbestos and lead based paint remediation work is handled through a Design Data Collection (DDC) packet process which is described on the next page. This process expedites abatement tasks to within 24 to 48 hours, and requires an assessment to determine if there is a need to relocate building occupants until the work is completed. A Design Data Collection (DDC) packet is completed by the District's Industrial Hygienist for IEQ inspections that result in the need for abatement or remediation, such as mold, asbestos and lead based paint. DDCs define the location, type of and quantity of materials to be abated or remediated, as well as the source or cause of the concern, e.g., roof leak. A photo log is also important to the packet. Recommended abatement and remediation means and methods are also included.

The District measures the performance of the IEQ Program primarily based upon the completion rate of corrective actions. Eighty three percent (83%), or over 6,200 IEQ corrective actions, have been implemented since 2010. In 2015, the District conducted IEQ evaluations at 101 schools and provided over 1,700 IEQ corrective actions. Approximately, 80% of the 1,700 actions (over 1,300) were implemented. As the District moves forward with the IEQ program, further work and initiatives are underway to attain the goal of reduced asthma triggers in classrooms. This includes initiatives such as door sweep inspections to identify penetrations around doors and entranceways that allow for pest entry; classroom decluttering campaigns; and, training for building, administrative and instructional staff about asthma triggers and how to remove them. Over time, the District will continue to become more strategic and data driven so as to illustrate the health and environmental outcomes of the program.

The District has partnered with the US Centers for Disease Control and Prevention, National Institute of Occupational Safety and Health (NIOSH), and the Philadelphia Federation of Teachers Union, to pilot a proactive Dampness and Mold Assessment Tool (DMAT). Since 2011, the District has provided feedback to NIOSH about the usefulness of the DMAT in proactively finding mold and dampness in schools, and how to refine the tool to make it more useful and easier to use by other school districts. During this process, the SDP has trained nine inspectors on how to conduct the DMAT assessments. The District has incorporated a refined version of the DMAT assessment criteria into the biannual AHERA inspections and developed an easy to use scope of work for remediation tool that gives an immediate report to the

Maintenance Division when mold or water leaks are identified. This allows OEMS to communicate “fixes” when mold findings occur.

In addition to the DMAT pilot program, the District and the Philadelphia Federation of Teachers Union have also joined NIOSH in a public health research project involving health and environmental at fifty elementary schools during the Spring of 2015. This was a very comprehensive study that involved onsite environmental surveys and internet based health surveys that teachers and other school staff completed. Environmental dust samples were collected in a group of schools for microbiological analysis and other environmental measures were collected for ventilation. NIOSH investigated associations between environmental and health conditions and investigated associations between objective microbial measurements from environmental sampling and dampness/mold scores from the DMAT data. A major goal was to use the information collected to assist schools nationally to understand how building related symptoms in occupants might be associated with environmental problems in buildings, which will help to motivate appropriate remediation and maintenance.

**Coalition Goal # 3: Identify and address the most critical health and safety priorities.**

**District’s Response:**

The District’s Indoor Environmental Quality (IEQ), as described above infuses work orders into the Maintenance Department’s work order system. These work orders are prioritized as IEQ work orders and are tagged with a higher priority than other work orders. This prioritization is based upon the understanding that IEQ issues are environmental health issues that impact student health and academic performance. Secondly, the District’s Capital Improvement Program incorporates the building symptoms that are identified through the IEQ program into its Facility Master Plan. Specific examples of school projects that were spurred by environmental health symptoms include: Loesche ES roof replacement, Webster ES HVAC replacement, Dunbar ES roof replacement, Lowell ES exterior masonry repair, Bartram HS roof replacement, JH Moore ES exterior masonry and roof replacement, Motivation HS at Turner major renovation to include HVAC replacement, Duckrey ES HVAC replacement, Bryant ES pointing and roof replacement, Cooke -Wissahickon ES exterior pointing and RR Wright ES roof replacement. These capital projects addressed the root cause of environmental health conditions including dampness and mold, thermal control and ventilation.

**Coalition Goal # 4: Develop a comprehensive district-wide “Facility Master Plan [FMP].**

This is the published Capital Improvement Program as administered by the Office of Capital Programs. The data from the District’s Facility Condition Assessment is infused into the District’s Capital Improvement Program, in addition to data from the Indoor Environmental Quality program’s and the Maintenance Department’s maintenance and work order system.

**Coalition Goal # 5: Increase engagement of parents, teachers and the public.**

**District’s Response:**

Engagement is one of the five guiding principles of GreenFutures (others include: equity, education, efficiencies and environment, p. 4 of plan). The monthly meetings held with committees from each of the five focus areas provide an opportunity for engagement with stakeholders and partners, from

parents and students, to nonprofits, higher education and government agencies. Some of these partners are listed below. Additionally, GreenFutures' professional development and educational outreach sessions are provided for teachers, operations staff and parents/families through the District's Office of Talent, and from the Office of Family and Community Engagement, for topics such as asthma, green schoolyards, environmental health, etc. Finally, the District's GreenFutures first annual report itself is an effort to engage the community with data and updates the 65 actions outlined in the plan.

Coalition Goal # 6: Supporting increased funding to finance these crucial initiatives to ensure our school buildings are environmentally safe.

District's Response:

The District has funded the installation of a minimum of three new hydration stations per school this year. These are filtered for lead, chilled and provide a bottle filler outlet that also has a digital counter to observe how many plastic water bottles have been saved from landfills.

The District has funded paint and plaster stabilization projects at five schools this past year.