

# IAQ Management Plan

Garrett-Keyser-Butler School Corporation

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## MISSION STATEMENT

The health, comfort, and learning environment of students and staff are important aspects of Garrett-Keyser-Butler School Corporation's mission. Working with EPA and their *IAQ Tools for Schools* Program, we developed an IAQ Management Plan that will help monitor and improve the quality of air in school buildings. The objectives of this IAQ Management Plan are:

- 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 airflow by repairing and maintaining ventilation equipment, which will promote a comfortable and healthy learning and working environment.
- Respond to IAQ-related concerns and problems in a prompt and thorough manner, and effectively communicate the progress of investigations and their resolution to all interested parties.

## ROLE OF THE IAQ COORDINATOR AND IAQ TEAM

### IAQ Coordinator

Garrett-Keyser-Butler School Corporation has identified Janis Arrington as the IAQ Coordinator for the corporation. The school administration and school board is committed to providing the necessary support to meet the school corporation's IAQ Management Plan objectives.

The IAQ Coordinator's responsibilities include:

- Acting as the key contact person within the district to respond to and address IAQ issues and concerns.
- Coordinating the development and management of the corporation's IAQ Management Plan. This includes establishing and overseeing an IAQ Team, coordinating building walkthrough inspections, coordinating the building system evaluations,

coordinating the investigations of reported IAQ issues and concerns, and modifying the IAQ Management Plan to fit the corporation's specific needs and objectives.

- Responding to IAQ concerns and issues that are discussed or reported.
- Coordinating the IAQ team's activities and meetings, including distribution of the IAQ checklist.
- Communicating with staff, parents, and other parties regarding the progress made with the Plan and the process of reporting IAQ concerns.
- Coordinating the annual review of the Plan, which involves building walkthrough inspections, building systems evaluations, and revising the Plan to include new information.
- Obtaining school board approval of the IAQ Management Plan after every major revision.

## IAQ TEAM

Garrett-Keyser-Butler School Corporation has established an IAQ Team to represent staff, students, and parents. The IAQ Team assists the school district administration by reviewing IAQ-related information and recommending IAQ policies to maintain and improve the air quality within district facilities and school buildings.

Led by the IAQ Coordinator, the IAQ Team is involved in the following efforts.

- Supporting the IAQ Coordinator to ensure good IAQ in all facilities and areas.
- Contributing to the IAQ Management Plan development and implementation. The members distribute the IQ checklists and the *IAQ Backgrounder* to the appropriate staff members.
- Meeting quarterly to review and resolve IAQ issues.
- Meeting annually to review the IAQ Management Plan, which includes the completion of walkthrough inspections of school buildings, key building systems evaluations, and the review of existing policies in the IAQ Management Plan.

- Meeting to evaluate and respond to IAQ concerns that have been reported to the corporation. The Team takes steps or recommends measures to resolve the reported concern.
- Maintaining IAQ Team meeting minutes, reports, and other documents in the IAQ Management Plan.

## IAQ TEAM

Name	Position	Contact Info
Janis Arrington	Corporation Nurse IAQ Coordinator	#5300
Scott Cooper	Director of Physical Plant	#5201
Pam Good	Business Manager	#5001

## BACKGROUND AND IAQ FINDINGS

Indoor air quality is a critical component of providing a healthy and comfortable learning environment. Indoor air pollution may cause or contribute to short and long term health problems including asthma, respiratory tract infection and disease, allergic reactions, headaches, nasal congestion, eye and skin irritations, coughing, sneezing, fatigue, dizziness, and nausea. In addition, indoor air pollutants and extremes in temperature and humidity may cause discomfort, which can affect students' ability to concentrate and learn.

IAQ problems can hasten building deterioration, contribute to the closing of schools, create liability problems, and strain relationships among parents, teachers, school staff, unions, and the school administration.

The IAQ Team and IAQ Coordinator researches IAQ issues affecting the school. For example, schools' histories related to radon, pests, lead, and other IAQ issues are investigated and documented.

During the walkthrough inspections and building systems evaluation, the IAQ Team and the IAQ Coordinator identifies IAQ and problems and issues. The issues are prioritized from most important to least important. Urgent or simple issues are addressed first and issues that require continual attention are scheduled appropriately.

Problems are reported to the IAQ Coordinator, who documents all IAQ concerns, performs an initial investigation, and documents and communicated the resolution to all interested parties. Many issues are resolved using in-house staff. However, professionals, experts, and other outside personnel may be brought in to deal with specific issues.

The IAQ Coordinator and IAQ Team uses a variety of tools to help identify IAQ problems. If the problem cannot be identified or persists despite the corporation's efforts to identify and remediate it, the IAQ Coordinator or designee discusses the matter with the appropriate school officials in order to determine whether a contracted service provider is needed.

When a problem has been identified, the IAQ Coordinator coordinates a response, communicates with the relevant parties, documents actions taken, and keeps copies of all documents. When the problem is not urgent but requires a policy change, the IAQ Coordinator organizes a meeting with the IAQ Team to develop or recommend specific policy changes. These policy changes are presented to the appropriate school officials for review and adoption. All new or revised policies are added to the existing IAQ Management Plan. All interested parties are informed about the measures taken to resolve the problem and all policy changes.

## IAQ POLICIES AND GUIDE LINES

### **Board Policy #8405 - Environmental Health and Safety Issues - Indoor Air Quality, Animals in the Classroom, And Idling Vehicles on School Property**

Animals in Classrooms - While many teachers and students have classroom pets, animals can be a source of allergens, asthma triggers, and microorganisms that may cause infectious diseases. Therefore, Garrett-Keyser-Butler School Corporation has instituted an animal policy based on information gathered from walkthrough inspections, building systems evaluation, IAQ concern reports, and staff meetings.

Animals should be isolated to the extent possible and should be kept away from carpets, upholstered furniture, and stuffed toys. Specific types of animals may be restricted from the classroom if a concern is expressed by staff, students, or parents. The corporation also reserves the right to ban certain animals if they pose a threat to the safety or comfort of staff and students. Classroom pets should be placed away from return air ducts and from students with known allergy or asthma problems.

School Bus and Other Vehicle Idling Vehicles - Delivery and bus pickup and drop off zones have been located away from buildings. The outdoor air intakes ensure that exhaust fumes do not enter the facility. Garrett-Keyser-Butler School Corporation prohibits buses and cars from idling while waiting to pick up or drop off students. Buses shall idle no longer than the time required to bring engines to proper operating temperature and to defrost all windows. This policy is not in effect when temperatures fall below 32 degrees Fahrenheit.

## **Food in the Classroom Guidelines**

Food should not be left in classrooms. When it is necessary to store food in classrooms, it must be kept in airtight, sealed containers to minimize the potential for pests, odors, and biological growth.

## **Painting Guidelines**

Schools must use latex, water based paints; using paints that contain mercury or lead is prohibited. Painting and drying should only occur when the area of the building is unoccupied and properly ventilated. It is also important to inform all affected staff and students before a painting job begins.

## **Board Policy #8431 - Chemical Management and Preparedness for Toxic or Asbestos Hazard**

It is important to handle hazardous materials according to the manufacturers' guidelines. Wastes generated from hazardous materials should be stored separately from regular waste and disposed in appropriate containers. Hazardous materials are common in art, science, and vocational/industrial classes. Training sessions for staff can help explain the risks associated with hazardous materials and the importance of complying with this policy.

## **Asbestos Hazard Emergency Response Act Management Plan**

An AHERA Management Plan is required by Federal law and is intended to prevent staff exposure to asbestos during general operation and maintenance activities. It describes the location and condition of asbestos-containing building materials, and documents their removal and repairs. The AHERA Management Plan also describes the proper recordkeeping practices that school officials must follow. Schools must update their AHERA Management Plan with information collected from their periodic surveillance every 6 months, re-inspection of buildings



for asbestos-containing materials every 3 years, and response actions taken within the school.

### **Board Policy #8432 – Pest Control and use of Pesticides**

Integrated Pest Management (IPM) is a comprehensive strategy for controlling pests, pest generated substances (such as cockroach fecal matter), and pesticides, which can act as irritants and trigger allergies and asthma. The corporation’s IPM program aims to reduce the frequency and magnitude of both pesticide use and pest problems.

### **Lead Guidelines**

Lead can adversely affect the nervous system. Young children are particularly susceptible. If lead is present in existing school building paint coatings, renovation procedures must be employed that minimize the exposure of building occupants to airborne lead-based paint particles. In addition, water sampling is performed as necessary.

### **Radon Gas Policy**

Radon is a naturally - occurring gas that can enter into school buildings from the underlying soils, and build-up to levels that increase occupants’ risk for developing lung cancer. Information of radon testing and mitigation is located in the Maintenance Office

### **Board Policy # 5512 – Use of Tobacco**

Garrett-Keyser-Butler School Corporation prohibits tobacco use in all public school facilities and vehicles. Information about smoking regulations is posted in staff and student handbooks and outside doors.

## **Furniture Guidelines**

Classroom furniture shall be maintained so as to prevent accumulation or growth of allergens.

Sanitary Schoolhouse Rule already states furniture must be durable and easily cleanable (no upholstered furniture in classrooms).

## **PROCEDURES**

### **Cleaning and Chemicals**

Regular and thorough cleaning is an important means for the removal of air pollutant sources. However, the use of cleaning products may also contribute to indoor air pollution. To ensure that cleaning practices remove pollutant sources while using cleaning products appropriately, guidelines have been created.

- Custodial staff shall only use cleaning agents approved by the corporation for school use. All products must be clearly labeled and stored in a secure area. Bottles of cleaning agents must be tightly closed when stored.
- All safety data sheets should be stored in an area available to all staff, and the location of this information is discussed in the corporation's annual orientation.
- Rooms must be kept clean. Slightly damp cloths are used to remove dust from surfaces – however, wiped surfaces should not be left damp or wet for extended periods of time, since this can cause mold growth.
- Ammonia-based cleaning agents and chlorine-containing cleaners (such as bleach) must never be mixed because this generates toxic gases.
- During routine operations, pollutant-releasing activities are restricted by time of day, week, or year.
- Areas of frequent use should be cleaned more often than areas of infrequent use.
- Large walk-off mats must be used to trap dirt and moisture at building entrances. These mats are cleaned according to

manufacturers' guidelines to ensure optimal performance. Trapping dirt and moisture at building entrances helps to maintain the cleanliness of floors and carpets throughout the building.

- Staff is not permitted to bring any cleaning products, pesticides, air fresheners, or other chemicals into the school.

## **Flooring**

The two most common types of floor covering for general use in schools are carpet and resilient floor covering products. Carpet offers acoustical and comfort benefits that are generally not available with other floor coverings. Many schools prefer to use carpet in classrooms and administrative areas. Resilient flooring is used for high traffic areas including classrooms, hallways, cafeterias, art rooms, restrooms, and anywhere liquid spill are likely.

While there is considerable debate about the most appropriate flooring material for use in schools, EPA recognizes that there are advantages and disadvantages associated with all types of floor coverings. Regardless of the floor covering type, regular and effective cleaning and maintenance is essential to keep it dry and clean. All carpets must be cleaned with hot water extraction at least once a year. Carpet may not be cleaned during summer months unless it can be dried within 24 hours.

## **Preventive Maintenance and Operations**

Preventive maintenance involves routine inspection, adjustment, and repair of building structures and systems, including the heating, ventilating, and air conditioning system (HVAC); unit ventilators; local exhaust; fresh air intakes; and flooring. Preventive maintenance plays a major role in maintaining the quality of air by assuring that the building systems are operating effectively and efficiently. Moreover, it helps to maintain comfortable temperatures and humidity in occupied spaces.

The preventive maintenance schedule for Garrett-Keyser-Butler School Corporation can be found in maintenance office. The schedule describes the time intervals and locations of building and ventilation components that are inspected and maintained on a routine basis. The schedule was established using the past experience of school corporation maintenance professionals, the availability of financial resources, and technical guides, including the manufacturer's specifications. All records of preventive maintenance are kept attached to the relevant operating systems for easy evaluation.

Unless otherwise noted, school buildings should be maintained according to the American Society of Heating, Refrigerating, and Air-Conditioning Engineers' (ASHRAE) recommended comfort parameters. If the recommended parameters cannot be met, the corporation staff makes ventilation adjustments that provide fresh air, temperature, and humidity levels that are as close to the ASHRAE parameters as possible.

### **Construction and Renovation**

Garrett-Keyser-Butler School Corporation will consider IAQ when planning construction and renovation projects. The IAQ Coordinator, IAQ Team, superintendent, and school board will discuss major structural changes that may impact IAQ. The findings from walkthrough inspections and building systems evaluations will be considered when planning renovations.

To the extent possible, major renovations will be performed when school is not in session. If renovation projects must be performed while school is in session, the return air from any area being renovated will be isolated from the main ventilation system. Engineering controls should be used to contain and minimize the distribution of dust and other contaminants produced by construction activities. Cleaning operations will be more frequent during and after renovation.

## **Microbial Management**

Microbials, such as mold, bacteria, and viruses, are a significant cause of illness, health symptoms, and discomfort. School staff should be aware that the easiest way to control microbial growth is to control moisture.

Signs of water intrusion and microbial growth should be investigated during the walkthrough inspections, building system evaluations, and other efforts. The maintenance staff should be informed about damaged buildings systems and components that cause water leaks and water condensation. School staff must make the necessary repairs and adjustments in a prompt manner. Materials damaged by water should be replaced when possible. Damp or wet materials must be dried within 48 hours.

Materials contaminated with microbials should be promptly cleaned or replaced. Mold growth should be removed from non-porous surfaces with a strong brush and non-ammonia containing detergent and thorough drying. Remediation projects that cannot be handled by corporation staff should be contracted to a professional. Large-scale remediation projects may require specific control and protection measures. (follow EPA guide).

## **Staff Education**

All corporation employees play an important role in maintaining and improving air quality since their behavior can affect the quality of the air present in school buildings. For example, placing objects on unit ventilators, adjusting room thermostats, or turning off unit ventilators can worsen the quality of air in a room. An educated employee is more likely to take steps to maintain good air quality. In addition, an employee with an understanding of IAQ is more likely to report IAQ concerns quickly and accurately. For these reasons, the corporation must be educated about IAQ.

Garrett-Keyser-Butler School Corporation will perform annual IAQ training sessions.

## Communication

Communication is a critical element to successful IAQ management. The IAQ Coordinator and other corporation authorities try to limit misinformation and confusion through the use of effective communication. In order to develop and maintain the trust of the community and staff, the IAQ Coordinator and other designated corporation employees should communicate with relevant parties in a prompt, honest, and courteous manner until the issue is resolved. Every time an IAQ concern is addressed or resolved, the IAQ Coordinator should report the measures taken and the resolution of the identified concern to the appropriate parties.

In the unlikely event of an IAQ emergency, the corporation will accommodate the needs of the students, parents, and staff. The superintendent or designee shall handle the media and update the community during a crisis. No one other than the superintendent or designee should discuss IAQ-related issues with the press. Every effort will be made to share appropriate information as soon as it becomes available to the corporation.

The IAQ Team and Coordinator will inform parents and staff about:

- The IAQ Management Plan and ongoing efforts, how to view the Plan upon request, and how to obtain an IAQ Concern Reporting Form.
- How to contact the IAQ Coordinator about IAQ issues,
- Where to find self-help information on how to evaluate IAQ in the school and to learn about structural features and operational practices of the school buildings.

## Staff Responsibilities for Maintaining Good IAQ

All staff members are responsible for improving and maintaining good IAQ.

- **Teachers** should refrain from interfering with airflow from ventilators (e.g. do not stack books or other items on ventilators, cover vents with posters, or turn off the fan due to noise), remove

- clutter in their classrooms, properly dispose of hazardous waste, and enforce the school's various IAQ policies in their classrooms.
- **Administrators** should communicate the school's activities to the school board, staff, students, and community. They also need to ensure that the school is implementing IAQ policies appropriately.
  - **Facility operator's** must ensure that HVAC systems are operating properly and that buildings are maintained adequately and cleaned regularly.
  - **Custodians** need to follow all policies regarding cleaning chemicals, ensure that the school is regularly vacuumed and swept, clean drain pans, empty trash cans, and check drain pipes regularly. They should also look for signs of pest problems and inform the appropriate people of any issues.
  - **School Nurse** should track illnesses, such as asthma, that may provide early warning of IAQ problems.
  - **The School Board** needs to approve the IAQ Management Plan. This approval shall include the date, a copy of the minutes from the meeting, and how often the Plan must be updated or reapproved (e.g. after every major change to the Plan).

### **Applicable Local and State Requirements/Regulations**

Garrett-Keyser-Butler School Corporation will meet the following local and state requirements and regulations related to IAQ.

- Non-smoking laws
- Asbestos regulations

## **EMERGENCY RESPONSE**

### **Emergency Response Policy**

An emergency is defined as an unforeseen circumstance that requires immediate action, assistance, or relief. This includes situations that are potentially life threatening, such as:

- Spills of hazardous materials;
- Complaints of severe headaches, nausea, and combustion odors:  
and

- Diagnosed Legionnaire's disease or tuberculosis.

In addition, emergencies include situations where there is limited time available to prevent serious property damage, such as flooding in a carpeted area or health problems.

It is up to the discretion of the IAQ Team to identify and react to emergencies on a case-by-case basis, using the above definition as a general guideline only. If doubt exists about whether exposure to a specific hazard constitutes an emergency, a precautionary approach may be used where the matter is handled as an emergency.

Garrett-Keyser-Butler School Corporation encourages the reporting of IAQ concerns, regardless of how trivial the issue may seem. The prompt reporting and resolution of IAQ issues has the potential to prevent serious problems from developing, which will help to prevent potential health effects, discomfort, and unnecessary costs. This makes the investigation of all reported concerns worthwhile.

The IAQ Coordinator should request concerned staff, students, and parents to report their IAQ concerns in writing. A written description of the concerns reduces misunderstanding and creates a history that can be referred to at a future date. All written concerns should be sent to the IAQ Coordinator to initiate an official IAQ concern reporting process. The resolution of the issue needs to be documented and the affected parties should be informed in writing about the measure taken.

The reporting form is located on the teacher/staff desktop.