

Team Up To Improve IAQ At Work!

Why teams?

A team approach to IAQ can:

- Keep the work of investigating and evaluating IAQ problems manageable by sharing the load
- Combine individual expertise in research, communications, engineering, etc. into group problem-solving power
- Sustain processes and improvements over time, and through changes in personnel

While it's true that employees can't resolve all workplace IAQ problems, workers can influence communication needed to improve IAQ. Employee insights and involvement can be critical to successes.

Green Team members can represent the interests of all workers, and can contribute

significantly to a healthy working environment for all.

A healthy workplace minimizes costs and contributes to profitability. A wise business owner will invest in workplace health improvements, such as IAQ, and support an efficient, dedicated Green Team's efforts to improve IAQ. Case studies in the **Tools** section (pages 28-33) describe cost-saving opportunities related to IAQ.

Individual workers often start initiatives to improve environmental conditions in the workplace, such as recycling, conserving energy or improving IAQ. Individual efforts are important, but they are at risk when that individual pulls back. Workers can sustain progress when they team up.

Get Green Team Power

1. Involve all stakeholder groups
2. Form a lean Green Team
3. Choose an IAQ champion to lead
4. Secure management support
5. Work with your facility manager

How to form your Green Team.

1. Involve all stakeholder groups

Recruit representatives of groups directly involved with decisions and activities that affect IAQ, as well as representatives of your general employee population. Ideally, Green Team participants should represent full-time, part-time and contractual employees. IAQ problems don't discriminate between salaried and hourly staff!

If possible, include someone responsible for purchasing and a member of your business management team. Involve a clerical or support person. If cleaning is an in-house function, definitely include a housekeeper or custodian. If your business handles any equipment maintenance, include a member of the maintenance crew.

2. Form a lean Green Team

Depending on the size of your workforce, a Green Team can consist of 3-8 members who care about clean air. Involve individuals with energy and enthusiasm. Don't recruit at random – and avoid having the boss assign Green Team activity as a job requirement.

If appropriate, expand existing environmental efforts to address IAQ. For example, individuals already involved with recycling may want to expand their environmental focus. Or add new participants to distribute Green Team tasks among several individuals.

3. Choose an IAQ champion to lead

Most IAQ issues can't be settled solely by Green Team members, because property owners or their facility managers often control factors affecting IAQ in office buildings. For efficiency's sake, select one person to represent your Green Team in interactions with building managers, IAQ specialists, your building's owner or a property management representative. IAQ information can be technical, so choose a Green Team leader with affinity for this subject. It's helpful if this individual also has the personality and skills to rally overall workplace support for IAQ.

4. Secure management support

Strong and vocal approval from the top management of your business is essential. This sends a clear message that your

organization is truly committed to IAQ improvement and protection. As efforts proceed, management should support IAQ goals by endorsing research into problem situations, communicating the importance of a healthy work environment and recognizing employee participation in an IAQ improvement process.

Business owners or other high-level leaders usually make decisions about building renovations or relocations. Educate these stakeholders about the importance of IAQ to motivate them to incorporate IAQ goals during planning for facility expansions or improvements. If your business rents space, encourage managers to advocate for IAQ in your workspace with building owners and property managers.

Make the case to management that employee experiences of health, comfort and satisfaction within the working environment have a significant impact on productivity and profits. Healthy workers will be on the job – not out sick – with the energy needed for productive collaboration!

5. Work with your facility manager

The most important relationship your Green Team can form outside of your own office will be with your building's facility

manager. A person in this position is an operations specialist, whose job includes keeping HVAC and other systems running effectively, and dealing with any hazardous conditions in their buildings.

Facility management professionals are increasingly knowledgeable about measures to achieve money-saving energy efficiency. It's a logical next step for them to understand and support IAQ goals, because HVAC efficiency concerns are closely linked to factors affecting IAQ.

Although the job of resolving an IAQ problem often falls to a facility manager, technical training for IAQ maintenance is often "pigeonholed" within the field of Industrial Hygiene, so this kind of information is not always included in facility management training regimens.

Your Green Team can help your building's facility manager build his or her IAQ resources by recommending materials listed in this toolkit, such as those offered by U.S. EPA (see [Resources](#), page 41).

- **The individual who oversees operation and maintenance of your building's air circulation systems can be an essential partner in a Green Team's office IAQ improvement process**

Facility Manager



A workplace Green Team can effectively address environmental concerns, such as IAQ.

Green Team steps to improve IAQ at work.

- Good data is necessary to find the source of a suspected IAQ problem

Track Down Facts

- Respect your co-workers!
- Keep all information from IAQ survey and diary forms confidential

1. Gather information on IAQ issues

This toolkit includes three data logging forms and an office walk-through guide designed for Green Team members to use with co-workers who are experiencing problems that may be related to IAQ. Photocopy these forms from **Tools**, pages 23-25, and distribute them as needed.

A. Conduct an IAQ walk-through of your workplace to identify possible IAQ trouble spots, using the **Detox Your Office IAQ Walk-Through Guide**. Use the **Workplace IAQ Survey Form** to interview co-workers who are reporting IAQ problems. Also interview all employees working in or around the physical area where an IAQ complaint has been identified. Be sure to note these survey responses factually and accurately.

B. Give the **Occupant Diary Form** to all individuals who suspect they are experiencing an IAQ problem. Ask them to log information about their physical symptoms on the form for an appropriate period of time. If mild or intermittent symptoms are involved, ask that this log be maintained for a few days to a couple of weeks. If a very troublesome condition is occurring, you may only be able to monitor this information for a short time.

C. Have a Green Team member keep an **Internal/External Data Log** of activities that might impact an IAQ condition in the affected area. For example, note information about cleaning routines. Note the performance of any non-routine services such as insecticide spraying, delivery of new furniture or fixtures, installation of new office plants, or on-site fertilizer or pesticide treatments applied to plants by co-workers or employees. Were several people ill or absent simultaneously because of respiratory ailments? Was any unusual cooking done at work? Note times and durations when windows are open or when doors are propped open.

D. Also track on the **Internal/External Data Log** factors such as outdoor temperature, precipitation and humidity conditions, and pollen and mold counts. Many cities have established partnerships between air quality advocacy agencies like the American Lung Association and local news media, to provide the public with information on air pollutants. Reports typically address levels of ozone and fine particulate matter. Check your local TV or newspaper weather reports for air quality forecasts, or look for this kind of information online.

E. Especially when dealing with a sudden IAQ problem flare-up, also note on the **Internal/External Data Log** the time, duration and nature of any pollution-related occurrences near your building, such as a fire or industrial accident. If your workplace is near a busy road or a major highway, note times when traffic is heaviest. Remember that outdoor air pollutants can become significantly concentrated in indoor spaces.

2. Analyze findings objectively - look for trends

As you analyze the information your co-workers have provided on this toolkit's forms, note whether IAQ complaints coincide with the presence of any obvious pollutant(s) into your workplace. Use this information as a guide to identifying cause-and-effect relationships. Do **Occupant Diary Form** complaints coincide with any internal or external circumstances when pollutants might have been introduced?

Assess the physical surroundings where complaints occur. Is clutter gathering dust? Are there sources of pollution outside windows or doors? Are there physical obstructions to healthy air flow? If furniture or stored items are blocking vents or air-return grilles, any pollutants introduced by indoor or outdoor activity will probably not be dissipated by normal HVAC flows, and may have concentrated in the affected area.

3. If possible, adjust the situation

- Clean up clutter! Give cleaning personnel adequate access to keep your workplace pollutant-free. Prevent accumulation of dust and dirt. Store items in cabinets or sealed boxes or on shelves that can be easily dusted during regular housekeeping routines.
- Keep air vents free of obstructions. Move furniture or stored items so nothing is blocking heating and cooling vents or cold air returns.
- Ask co-workers whose windows overlook a loading dock, busy intersection or highway ramp to keep their windows closed to keep out pollutants.
- Segregate the problem! Some adverse IAQ reactions will cease when an irritant or pollutant is segregated from an affected individual. If you find that a chemically sensitive person's workstation is located near the source of a substance that irritates them, remove the substance or try to move that individual away from the problem. Not every IAQ problem will lend itself to a reorganizing solution, but don't overlook basic options for physical movement.
- To prevent mold growth, catch water leaks in a bucket or pan until the leaks can be repaired. Dry out or remove any damp carpeting or furniture.
- Reduce use of hazardous chemicals. Read the labels on all chemical supplies, including janitorial products, paints, glues and fixatives, lubricants, etc. If you find the words *Danger*, *Poison*, *Warning* or *Caution*, you have found a possible contributor to IAQ problems.
- Work to replace as many toxic products in the workplace as possible with non-toxic or less-toxic alternatives, such as those recommended by Green Seal or GREENGUARD (see page 21).

4. Store and handle substances safely

If your business must use toxic chemicals for cleaning, printing and other functions, store them properly in airtight closets or cabinets, preferably in exhausted spaces away from normal working areas. Use such products only according to label directions, in proper concentrations, with appropriate ventilation and respiratory protection.

5. Refer to the IAQ standards within LEED and use them to advance IAQ "Best Practices" in your workplace

Review the LEED criteria for IAQ detailed in the next section of this toolkit. Are the complaints reported in your workplace related to any of the practices and products LEED recommends to maintain healthy IAQ? The cleaning practices and building material choices cited in LEED are specified because they are likely causes of IAQ problems unless green versions of these things are used.

The kinds of workplace IAQ improvement efforts this toolkit is designed to support will typically be able to address some – but not all - of the criteria defined by LEED. In this context, use LEED as a guideline for IAQ potentials, and as justification for addressing IAQ issues as they arise.

When you have successfully addressed an IAQ problem, such as fumes seeping from an improperly maintained storage area for cleaning chemicals, let that accomplishment leverage additional health promoting measures. For example, you might focus next on proactively working toward an upgrade of cleaning products and practices to LEED-level green standards.

If remodeling is being planned for your workplace, talk to project decision-makers and promote product choices based on LEED IAQ criteria, such as GREENGUARD-certified VOC-free paints, or Green Seal-certified carpeting or janitorial products.

Use case studies to make a business case for investing in the criteria for indoor environmental quality set forth by LEED. Many case studies are accessible on the U.S. Green Building Council's website (www.usgbc.org). Several case studies dealing with IAQ issues are included in this toolkit (see [Tools](#), pages 28-33).

You can obtain local green building case studies, perhaps including projects with IAQ issues like those in your business, through your local USGBC chapter, or other organizations listed in [Resources](#) (pages 41-42). Green building professionals, especially those working on LEED projects,



Get Things Moving

- If simple furniture or space adjustments might help solve the problem, make some moves!



Get Healthy Air

- Optimum ventilation and air circulation is needed for healthy IAQ
- Locate and unblock air vents throughout your working area

Respond To IAQ Complaints!

- Take co-worker complaints seriously when dealing with IAQ problems
- People are usually reacting to a real problem, whether or not they relate their symptoms to the actual cause

are usually more than willing to share information and resources that can help to improve health conditions for the occupants of any building.

6. Consult with environmental professionals when appropriate

Your Green Team's survey and interview findings may indicate that IAQ problems are originating outside your working space, perhaps in space occupied by other tenants. Pollutants may be circulating through the building HVAC system, or the system may not be functioning properly enough to maintain good air quality in your space.

In cases like these, talk to your building's facility manager. Document and describe the problem and share your findings. Be prepared to turn over the investigation to the facility manager, but ask that your Green Team be kept apprised of further findings and progress toward a solution. Offer to assist with further data tracking if appropriate. As you work with a facility manager, keep in mind that an IAQ issue originating outside of your workspace may be difficult to track to its source.

If a problem is severe or persistent, work with your business's management team and your building's owner or property management representative to arrange a consultation with an IAQ specialist, such as an industrial hygienist or an environmental testing and remediation firm.

7. Communicate!

Motivating building occupants to improve IAQ requires effective communication. Green Team members should be sure to:

- Establish an effective system for logging and responding to IAQ complaints
- Clarify responsibilities of all parties, including your company's staff and management, building management and contractors
- Provide accurate information about factors affecting IAQ. See the [Resources](#) section (page 43) for **Sources of Indoor Air Pollutants**, a descriptive and comprehensive listing provided by the U.S. EPA.

IAQ complaints should be handled promptly, with every incident given serious attention. Some complaints may be vague. For example, someone may report "an unusual odor" or may feel "sort of sick." Complaints might be very specific, blaming a particular material or activity as the cause of discomfort or health problems. Theories about an IAQ problem should be heard respectfully, weighed cautiously, and assessed along with observable evidence.

Remember that perception is a significant contributor to IAQ complaints. Once an IAQ problem is remedied, it's possible that people who experienced the adverse affects of the problem will react to triggers that make them think it's still occurring. One of the IAQ Case Studies included in this toolkit describes the aftermath of a serious mold issue in St. Louis' Parkway School District, where perception kept a problem alive even after it was technically solved (see **Parkway School District** in [Tools](#), page 30).

IAQ issues that can be resolved quickly and that involve small numbers of people can be handled matter-of-factly; for example, a situation where annoying but harmless odors are coming from an easily identified source. Responsive communication is most important when delays occur in identifying and resolving the problems, or when serious health concerns are involved.

8. Evaluate the Green Team process

Refer back to the steps summarized in the **Green Team Blueprint for Action** on page 22. What pieces should the team revisit? What new IAQ information does the team need? Who should be added to the team? Constantly evaluate your efforts for best impact on IAQ conditions.



Most importantly, respect co-worker confidentiality when dealing with IAQ issues!

9. Celebrate success and thank supporters

Resolving an IAQ problem can be a major accomplishment in the workplace. Persistence, cooperation and skill will surely have been applied. Have a member of your Green Team include a brief report on the outcome of your process and some form of recognition for the individuals involved in a staff meeting presentation or employee newsletter.

If outside help was required – from your building’s facility manager, the building owner or an IAQ specialist – send a formal thank-you letter to enhance relationships with these important IAQ guardians.

10. Incorporate IAQ awareness into business planning

Remind your boss to consider IAQ during planning for the growth of your business. Planning ahead to safeguard IAQ will usually cost less than dealing with IAQ problems as they arise.

It’s economically and practically most important to address IAQ concerns through planning when a business is anticipating office expansion or a move. Pay special attention to IAQ considerations during a real estate search or service-contract negotiation period. These factors include:

- HVAC system cleaning, modification, and maintenance specifications, in order to optimize air circulation and keep air pollutants out of the workplace
- Janitorial service specifications for use of Green Cleaning products and practices
- Pest-control service specifications for Integrated Pest Management techniques
- Selection of VOC-free paints, stains, fabrics, carpeting and other building and furnishing materials
- Adherence to an IAQ construction management plan during remodeling or building, to keep construction-related pollutants from accumulating in ductwork

- **Even simple measures can improve office IAQ**

Three levels of safeguarding workplace IAQ

1. Everyday

• Put plants to work for office greening

Did you know that some common indoor plants can remove pollutants from the air? Plants such as peace lilies, spider plants, golden pathos, and various types of ferns and philodendrons have been shown to filter certain chemicals from indoor air. Be sure to empty standing water from plant containers, to prevent allergy issues.

• Keep your workplace clutter-free

Messy areas that are hard to clean may be skipped during regular housekeeping. Clutter can become “storage” for office pollutants, and can block vents and grilles that are essential to healthy air circulation.

2. During contract negotiations

• Employ a Green Cleaning service

Solicit bids from janitorial companies that specialize in Green Cleaning. Ask for details on use of non-toxic cleaning products. Your office staff and your cleaning crew will all be healthier!

• Improve IAQ through regular building system maintenance

Ask about IAQ safeguards and IAQ maintenance expertise in leasing negotiations. Talk with your building’s Facility Manager about IAQ conditions, and offer to share resources from this toolkit.

• Specify materials that are VOC-free

Insist that painting, decorating and building contractors use products and materials that emit no air pollutants during application, construction or everyday use.

3. When planning a move

• Use LEED whenever your business plans to build or remodel

Work with a design professional who is LEED Accredited to apply LEED standards to a new or updated space. Whether you seek LEED certification for your building or not, put the LEED standards to work as “Best Practices” in your business.

- **Growing common plants can help keep office air clean and healthy**

