

# Fitwel Enhanced Indoor Air Quality Policy



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Enhanced Indoor Air Quality (IAQ) policies must outline the implementation of the following:

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## 1. Management and Maintenance

### Source Control:

- Manage pollutant sources through
  - properly sealing doors, floors, and windows,
  - regularly checking for and eliminating mold,
  - installing appliances so that they vent to the outside,
  - diluting and removing pollutants through ventilation.
- Manage moisture through
  - using moisture tolerant materials,
  - setting up systems to divert water away from the building.
- Implement a building-wide smoke-free policy

### Housekeeping:

- Detail best practices to improve the indoor air. Best practices may include:
    - Maintenance of interior plants (watering, pruning, etc.) where necessary
    - Regular disposal of garbage and other waste
    - Hygienic storage of foods, including refrigeration where necessary
    - Prohibiting products or other sources of harmful or bothersome odors and contaminants.
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## 2. Ventilation and Filtration

### Assessment:

- Consult with a certified engineering professional to assess the ventilation system to identify the following:
  - Ventilation needs based on occupancy levels, as determined by CO2 levels
  - The air changes per hour capacity of the ventilation system
  - Opportunities to increase the outdoor air supply and decrease recirculation of air
  - Impacts of ventilation adjustments on energy use, thermal comfort, and maintenance needs

- Contract with a certified engineering professional to assess the filtration system to identify the following:
  - The efficacy of current air filtration practices in removing particulates from the indoor air
  - Applicable strategies for increasing air filtration as needed

#### □ Ventilation Enhancements

- Detail regular ventilation for the building and ensure when operating, the system implements 30% higher ventilation levels than those outlined in the relevant ASHRAE ANSI Standard, as applicable to the building:
  - 62.1 - 2019: commercial buildings
  - 62.2 - 2019: residential buildings
- If supporting 30% higher ventilation levels than those outlined in the relevant ASHRAE ANSI standards is not possible, ensure that a minimum of one of the following ventilation levels are met:
  - People Outdoor Air Rate ( $R_p$ ): 10 cfm/person or 5L/s\*person
  - Area Outdoor Air Rate ( $R_a$ ): .18 cfm/ft<sup>2</sup> or .9 L/s\*m<sup>2</sup>
  - Combined Outdoor Air Rate: 22 cfm/person or 10.4 L/s\*person
- Avoid the blockage of ventilation supplies, exhausts and other grilles
- Demonstrate prioritization of natural ventilation techniques that take into account location, climate, and outdoor air quality, which can include any of the following:
  - Operable windows
  - Doors to the outside
  - Solar chimney
  - Wind tower
  - Trickle ventilator
  - Other intentional devices in the building designed for ventilation through thermal, wind, or diffusion effects.
- Establish an indoor air quality notification system to alert building management of potential issues
- Provide separate source ventilation for all areas that include the use or storage of chemical products that do not meet the below qualifying standards.
  - Green Seal
  - California Code of Regulations
  - Ecologo

#### □ Filtration Enhancements

- Detail regular filtration system for the building, and ensure integration of MERV 13+ filters
- If MERV 13+ filters are not able to be implemented, adopt one of the following filtration methods:
  - Upper Room UVGI Light: ASHRAE GPC 37: Guideline for the Application of Upper Air (Upper Room) Ultraviolet Germicidal (UV-C) Devices to Control the Transmission of Airborne Microorganisms)

- UV-C Light: ASHRAE Standard 185.1: Method of Testing UV-C Lights for use in Air Handling Units or Air Ducts to Inactivate Airborne Microorganisms
  - Mobile filtration unit(s)
- Maintenance**
- Describe regular maintenance of ventilation and filtration systems, which should include the following:
    - Inspection of HVAC system and peripheral devices to check efficiency, air balance, filter status, and status of the mechanical systems
    - Replacement of filters and any worn or non functioning parts as needed
    - Cleaning evaporators and condensers
    - Removals of standing water from drain pans
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### 3. Managing Closures + Significant Reductions in Occupancy

Ensure that in the event of closure of 2 weeks or more, the following steps are completed before reoccupancy:

- The building will be assessed for mold, excess moisture, and legionella, and any identified issues will be remediated.
  - If the HVAC system has not been active for 2 weeks or more, it should be operated for 48 - 72 hours to "flush out" the system.
  - After the "flush out" period, filters should be examined and replaced if necessary
  - If odors are detected during the "flush out" period identify the source, and remediate any residual mold.
  - Develop a schedule for weekly inspection of the HVAC system for the first month of occupancy. These inspections can be gradually reduced to monthly or quarterly depending on the system's maintenance needs.
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### 4. Procurement

Ensures that all new products and materials procured within the project meet the required thresholds from at least five of the product categories below. For each product category selected, ensure products and materials are either naturally low-emitting products (stones, ceramics, concrete, untreated solid wood) or meet the applicable certification and testing standards below:

- Interior Insulation:** 100% of insulation
- Flooring Systems:** 100% of all systems
- Ceiling Systems:** 90% of systems by square feet or meters
- Wall Paneling:** 100% of all paneling including, but not limited to interior wall assemblies, gypsum board, doors, frames, wall coverings, window systems, and interior surfaces of exterior walls)

- Paints and Coatings:** 90% by volume for emissions and 100% for VOC content of paints and coatings applied on-site and used on the interior of the air barrier
- Adhesives and Sealants:** 90% by volume for emissions and 100% for VOC of adhesives and sealants applied on-site and used on the interior of the air barrier.
- Furniture:** 90% by cost of furniture
- Composite Wood:** 100% of composite wood for cabinetry, excluding flooring, ceiling, wall panels, or furniture.

Accepted certification and testing standards:

- Certified to UL GREENGUARD Gold (accepted for all categories' VOC emission requirements except Composite Wood)
- California Department of Public Health Standard Method V1.2 2017 (accepted for all categories' VOC emission requirements except Furniture and Composite Wood)
- California Air Resources Board (CARB) 2007 Suggested Control Measure (SCM) for Architectural Coatings (accepted for Paints and Coatings VOC content requirements )
- California Air Resources Board (CARB) requirements for ultra-low-emitting formaldehyde (ULEF) resins or no-added formaldehyde based resins (Accepted for Composite Wood)
- South Coast Air Quality Management District SCAQMD Rule 1113 (accepted for Paints and Coatings VOC content requirements)
- South Coast Air Quality Management District SCAQMD Rule 1168 (accepted for Adhesives and Sealants VOC content requirements)
- ANSI/BIFMA e3 2019 credits 7.6.1, 7.6.2, and 7.6.3 (accepted for Furniture)
- EPA TSCA Title VI for ultra-low-emitting formaldehyde (ULEF) resins or no added formaldehyde resins (NAF) (accepted for Composite Wood)
- AgBB Testing and Evaluation Scheme 2010 (accepted for all categories' VOC emissions requirements except Furniture)
- EN16402 (accepted for Paints and Coatings VOC content requirements)
- EN13999 (Parts 1-4) (accepted for Adhesives and Sealants VOC content requirements)
- Green Star - Interiors v1.2 credit 12 for Indoor Pollutants to show compliance with low-emitting materials (accepted for Paints and Coatings, Adhesives and Sealants, and Composite Wood)
- European Decopaint Directive (2004/42/EC) (accepted for Paints and Coatings, Adhesives and Sealants VOC content requirements)
- Canadian VOC Concentration Limits for Architectural Coatings (accepted for Paints and Coatings, Adhesives and Sealants VOC content requirements)
- Hong Kong Air Pollution Control (VOC) Regulation (accepted for Paints and Coatings, Adhesives and Sealants VOC content requirements)

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## 5. Construction and Renovations

Includes a plan for managing indoor air quality during any construction and major renovations and prior to occupancy. The plan must at a minimum control for the following categories:

- Moisture, such as:
  - storing all absorbent products and materials separately in areas that are protected from dust and moisture.
  - avoiding enclosing wet materials during construction.
- Particulates, such as:
  - protecting permanently installed ventilation systems during construction
  - employing entryway systems at all construction site entrances and exists
- VOCs, such as:
  - storing VOCs separately from absorbent products and materials
  - installing all possible paints/coatings and adhesives and sealants prior to absorbent products and materials
- Outdoor emissions:
  - Developing a plan to protect occupied spaces from outdoor fumes generated by construction activities.
- Tobacco, such as:
  - prohibiting smoking within the construction site
- Noise and vibrations, such as:
  - Reducing noise and vibrations from construction equipment
- Ensuring that construction crews wear protective gear.