

## Sustainable Hotel Remodeling

A recent study showed that hotel rooms with the highest concentration of pollutants and chemical agents that attack the central nervous system were rooms recently refurbished with new carpet, painting and wood furniture.<sup>1</sup> To abate this effect, there are businesses dedicated to manufacturing and supplying products created with materials that contain low volatile organic compound (VOC) levels. Health does not need to be compromised in the pursuit of functionality and style. When purchasing commonly-manufactured products such as furniture, flooring and paint, it is important to be aware of when they use toxic flame retardants and other chemicals that contain relatively weak chemical bonds, which can ultimately result in unhealthy emissions. Providing guests and employees with a clean, safe and enjoyable environment is the priority of most hotels. Often, renovating or remodeling is done with the intent to improve guest experience. That experience can be easily improved with pollution prevention in mind.

### Volatile Organic Compounds (VOCs)

A Harvard University study indicated that allergies and asthma worsen with exposure to higher concentrations of VOCs in the air.<sup>2</sup> At least one in five Americans have allergies, and 20.4 million adults in the U.S have asthma.<sup>3,4</sup> When you remodel with a sustainable mindset, not only are you doing your part to becoming more environmentally friendly, but you are also helping millions of guests who rely on the hotel for a safe and healthy stay.

### Furniture

The production of fabric and upholstered furniture often includes flame retardant chemicals, which can slowly leach toxins into the air and contribute to poor indoor air quality (IAQ), risking the health of guests and employees. When purchasing upholstered furniture, seek out the Green Guard logo to ensure that they contain low VOC levels.<sup>5</sup> Today many furniture distributors provide labels that indicate whether or not the item contains harmful chemical agents. Check [this link](#) to learn how to read these labels.<sup>6</sup>

Fabric color, leather dyes, and tints can also lessen IAQ. If design calls for leather, seek out companies that use natural colorants and waxes that are environmentally friendly and avoid the use of toxic heavy metals in production.

Wood furniture has become an abundant component in the hospitality sector and opportunities to purchase sustainably-sourced wood products have become more accessible to consumers. To verify a product's source, look for the FSC (Forest Stewardship Council) Certification label.<sup>7</sup> This certification ensures that the product comes from an environmentally-conscious forest that is well-managed and monitored.

When procuring sustainably-sourced wood, avoid the use of highly-concentrated wood stains and sealants. To identify non-hazardous wood stains, ask your furniture provider for current furniture toxicity figures and eco-friendly alternatives which can drastically improve the IAQ.



### Paint

A fresh coat of paint can transform a dated space into a new room. That being said, a strong odor can leave guests with headaches and unpleasant experiences. When remodeling with paint, be sure to use a certified zero- or low-VOC emission or natural paint. For green paint certifications, look for brands under the FCS's Indoor Advantage Gold, Green Guard or Green Seal programs.<sup>5,11,12</sup>

**VOCs from paint easily evaporate into the air and can lead to:**

- Dizziness
- Skin, eye, nose and throat irritation
- Nausea
- Headache
- Liver damage
- Kidney damage
- Central nervous system damage

If possible, open a window after painting to allow air circulation to keep the room well-ventilated and avoid leaving absorbent furniture in the room while the paint continues to dry. Choose easy-to-clean brushes to avoid using chemicals or cleaning and find proper disposal or recycling locations for empty paint cans. If there is paint left over, consider dropping it off at your local hardware store or donation site of your choosing.<sup>14</sup>

## Flooring

Newly-installed wood flooring can upgrade the guest experience with a feeling of luxury and sophistication. Start the journey into sustainable design by incorporating eco-friendly flooring and leave signage to show guests that the hotel actively practices environmentally-preferable purchasing. Find products that have low VOC levels and are sustainably-sourced, water-based, and/or biodegradable from vendors such as FCS's FloreScore Certification or the National Wood Flooring Association.<sup>8,9</sup>

### Carpet

Newly-laid carpet includes the use of adhesive and cushions, which can be large contributors to poor air quality in hotel rooms. This harm stems from harsh chemicals used in construction, installation, and the amount of area that carpet covers in the rooms. CRI Green Label Plus creates a higher standard of indoor air quality by certifying carpet products that have extremely low VOC emission levels.<sup>10</sup> There are also other environmentally friendly options for diverting energy and waste in production of carpet by seeking out cradle to cradle brands, recycled material products, and the use of repurposed salvaged carpet.

## Deconstruction

Remodeling is a full cycle process. The hospitality sector can generate positive attention *and* rewards by doing renovations with sustainable deconstruction practices. Consider reincorporating deconstructed materials in the hotel's upcoming design. Reuse can save hundreds on disposal fees. If maintenance completes remodeling jobs in-house, consider keeping materials for future projects and track material in storage in a document for reference. If you use an external vendor, consider searching online for a local deconstruction company that works to limit waste production and creates tax deduction quotes from the donations. It is important to note that while using sustainable products can be beneficial and more efficient, correctly disposing of older furniture and construction products is just as integral to holistic pollution prevention methods.

Materials that are unsuitable for reuse can still be managed responsibly by donating to local groups or non-profits such as Habitat for Humanity that reuses material to build homes. If your material or furniture is unfit for reuse or donation, look to recycle your excess supplies through the city or a near by recycling center for specific items including e-waste, lighting, carpet, and many more.<sup>15,16</sup>

## Resources

<sup>1</sup> [Indoor and Build Environment. Characterization of Volatile Organic Compounds at Hotels in Southern China.](#)

<sup>2</sup> [Harvard T.H. Chan School of Public Health. Chemical compounds emitted from common household paints and cleaners increase risks of asthma and allergies in children.](#)

<sup>3</sup> [Asthma and Allergy Foundation of American. Allergy Facts and Figures.](#)

<sup>4</sup> [National Center for Health Statistics. Asthma.](#)

<sup>5</sup> [GREENGUARD. The GREENGUARD Certification Program.](#)

<sup>6</sup> [NRDC. Want to Avoid Toxic Couch Chemicals? Just Look for New Label!](#)

<sup>7</sup> [FSC. Forest Stewardship Council.](#)

<sup>8</sup> [SCS Global Services. FloorScore: Indoor Air Quality Certification for Flooring.](#)

<sup>9</sup> [NWFA. National Wood Flooring Association.](#)

<sup>10</sup> [CRI. Green Label Plus: A Higher Standard For Indoor Air Quality.](#)

<sup>11</sup> [SCS Global Services. Indoor Air Quality Certification.](#)

<sup>12</sup> [Green Seal. GREEN SEAL Standard For Paints, Coatings, Stains and Sealers.](#)

<sup>13</sup> [GREENGUARD Certification. Your Guide to Low- and Zero-VOC Paints.](#)

<sup>14</sup> [M. Landman Communications and Consulting. How to Select Less-Toxic, Low-VOC Paints, Primers, Stains, and Coatings.](#)

<sup>15</sup> [ADEQ. Recycling in Your Community.](#)

<sup>16</sup> [ADEQ. Recycling Locator](#)