

### 1.0 Intent

Many cleaning products have been shown to degrade indoor air quality, pollute water, and negatively impact the health of occupants and maintenance personnel. In an effort to maintain a clean facility, janitorial contractors often use harsh solutions that, while disinfecting the building, contaminate the indoor air. C&W's policy focuses on maintaining a healthy environment for all occupants and maintenance personnel, while ensuring a high level of cleanliness.

Implementation of the policy must include the following:

1. Review and understand the policy.
2. Determine to what extent the policy can be implemented within your portfolio, building or facility.
3. Discuss pertinent policy issues with the appropriate service suppliers/vendors.
4. Determine if there are any major impacts to the current building operations or additional costs associated with the implementation of the policy.
5. Develop written implementation plans along with the policy and discuss them with your client or building ownership (i.e. cost impact, changes in operation, notification to occupants).
6. Obtain client approval in writing.
7. In the event that a property is unable to implement the policy or parts of the policy, supporting documentation outlining the reasons for non-compliance should be maintained on file. The elements of this policy will be incorporated into the C&W Quality Assurance Review (QAR) process.

Please note that the approaches described in each of the "green" policies constitute a baseline. Individual facilities/properties are encouraged to further enhance the policies as appropriate in consultation and approval with your respective clients and building ownership.

The policy will be periodically reviewed and updated as required. Notification will be provided as updates occur.

### 2.0 Scope

The C&W Green Cleaning Policy (the Policy) applies to the Cushman & Wakefield location at 425 Market Street, San Francisco, CA. It outlines the general approaches to green cleaning including contract specifications, and guidelines for environmentally friendly cleaning solutions. The Policy further specifies methods for reducing dust and dirt and microbial growth through preventative measures and proper cleaning. Additional guidelines on treatment of carpets, janitorial training requirements, chemical storage guidelines, and cleaning equipment standards and specifications are provided.

### 3.0 Policy

The [U.S. Green Building Council's \(USGBC\) LEED EB: O&M rating system](#) was used as a framework of reference for the C&W Green Cleaning Policy. Please note that the LEED certification requirements may include more stringent application and documentation.

### Approaches to Green Cleaning

- A. Cleaning is performed in order to:
  - 1. Maintain a healthy indoor environment for all occupants
  - 2. Maintain a clean facility and consequently increase the lifetime of the facility, fixtures and systems as well as maintaining the value of same.
- B. Coordinate cleaning with other basic environmental management strategies:
  - 1. Control pollution and waste by reducing the amount of consumables
  - 2. Limit indoor-polluting activities
  - 3. Ventilate buildings to reduce indoor contaminants
  - 4. Design facilities and ventilation systems to optimize indoor air quality
- C. Follow fundamental environmental protection guidelines:
  - 1. Prioritize worker and occupant safety
  - 2. Establish that the primary reason to clean is the preservation of health, secondary reason is building appearance
  - 3. Clean to maximize the extraction of pollutants (particles, gas, and biopollutants) from the building environment
  - 4. Minimize chemical, particle, and moisture residues
  - 5. Minimize human exposure to pollutants with safe handling and storage practices
  - 6. Clean to improve the total environment
  - 7. Proper disposal of janitorial waste



### Custodial Cleaning Contract Specifications

- A. Janitorial contracts should include this Green Cleaning Policy, which addresses, at a minimum: green product specification, staff training, solution storage, dilution and safe handling and equipment specifications.
- B. The cleaning products used should meet [Green Seal's GS-37 standard \(Appendix A- GS-37 Standard\)](#). For chemicals that the GS-37 rating is not applicable to, (i.e. carpet cleaners, floor finishes, or strippers), use products that comply with the [California Code of Regulations](#) maximum allowable volatile organic compound (VOC) levels.
- C. In order to reduce packaging waste, concentrated cleaning products should be utilized when available and feasible.
- D. C&W's Green Cleaning specifications include, but are not limited to:
  - 1. Purchasing and using janitorial products that meet the [GS-37 standard](#) or comply with the [California Code of Regulations](#) maximum allowable VOC levels as required under [LEED EB: O&M](#).
  - 2. The contractor providing training for all janitorial staff in green cleaning practices and providing documentation of the curriculum and time applied to each subject. Training should include a minimum of 8 hours annually with refresher training as required.
  - 3. Purchasing and using paper products and trash liners that comply with the U.S. [Environmental Protection Agency \(EPA\) Comprehensive Procurement Guidelines](#).
  - 4. Requiring that janitorial companies use green cleaning equipment such as microfiber mops and high-efficiency particulate air (HEPA) filters in vacuum cleaners.

#### **Green Cleaning Solutions Specifications**

Performance Metrics and Measurement – 425 Market encourages the sustainable purchasing of cleaning products for the building, including all hard flooring and carpet care products, and requires that vendors support this effort where feasible. The practices listed below shall be implemented, to the extent practicable, with a target goal of at least 60% of products complying, based on cost. The Custodial Services Supervisor of Able along with the Building manager will track purchase rates of both compliant and noncompliant products.

- A. The cleaning products used should meet the [Green Seal's GS-37 standard \(Appendix A-GS-37 Standard\)](#). Green Seal also maintains a complete listing of [Green Seal certified products](#).
- B. Disinfectants, metal polishes, floor finishers, strippers or other products not addressed by the above standards should meet the appropriate standard, including Green Seal GS-40, Environmental Choice CCD-112, CCD-113, CCD-115, CCD-147, or the California Code of Regulations maximum allowable VOC level
- C. Disposable janitorial paper products and waste bags should meet one or more of the U.S. EPA Comprehensive Procurement Guidelines for Janitorial Paper and Plastic Trash Can Liners, Green Seal GS-09 or GS-01, Environmental Choice CCD-082 or CCD-086, or paper products made from rapidly renewable or tree-free materials.
- D. Hand soaps purchased should be free of added antimicrobial agents (except when required by health codes), meet Green Seal GS-41 or Environmental Choice CCD-104
- E. Procurement of general cleaning supplies such as dishwashing liquid and desk cleaner must meet the [GS-37](#) or [California Code of Regulation](#)s standards.
- F. Contractor's employees should be made aware of the availability of green cleaning supplies. Employees should be prohibited from bringing in unapproved cleaning supplies that do not meet the GS-37 standard.
- D. To the extent practical, contractor should ensure that cleaning or disinfecting products utilized in the building do not contain ingredients that are carcinogens, mutagens, or teratogens. These include chemicals listed by the U.S. EPA or the National Institute for Occupational Safety and Health on the [Toxics Release Inventory](#) (40 CFR, Section 372, Subpart D). If such products containing these toxic chemicals must be used (cleaning solutions for specific equipment, etc), only the minimum amounts will be used and the product must be disposed of properly.

#### **Reducing Dust and Dirt with Proper Cleaning and Preventive Measures**

Minimizing the amount of dust and dirt present in the building will reduce the amount of time and resources spent maintaining a clean environment as well as the amount of solutions required for cleansing.

- A. Place entryway mats at all main points of entry as appropriate into the building(s):

1. The entryway mats should measure at least five steps in length (approximately 10 feet), but are not required to span the entire width of the point of entry.
  2. Maintain a cleaning schedule for all main points of entry into the building which specifies how often and by what means the mats are cleaned (example: vacuum once a day).
  3. Enhanced vacuuming will reduce the amount of dust and dirt tracked into the building.
- B. Clean the floor with a vacuum, microfiber dust mop or damp-mop instead of a broom.
- C. Vacuum effectively:
1. Use vacuum cleaners that meet the requirements of the [Carpet & Rug Institute's Green Label Program](#) and that can capture 96% of particulates 0.3 microns in size and operate with a sound level less than 70dBA, and are ergonomically designed (backpack type).
  2. Use high-efficiency microfiltration bags, which retain dust and particles in the .3 micron range or smaller. (These bags may cost more but save on labor by reducing dust circulation.)
  3. The efficiency of the vacuum cleaner degrades as the bag becomes full. Check bag frequently and change / empty bags before they are completely full (80 – 90 %).
- D. Dust effectively
1. Use a damp, folded cloth or cloth-covered feather duster or a microfiber dust cloth.
  2. Use a wiping motion, rather than a flicking or sweeping motion, to ensure that dust remains on the cloth.
  3. To maintain the efficiency of the duster, change out before cloth begins to load up.
  4. When using treated dust mops, obtain pre-treated mop heads from a laundry service or spray the mop heads outdoors. (Dust-mop sprays generally contain petroleum products that can harm the user and building occupants.)
- E. Floor buffers
1. Use a medium-speed buffing machine. Medium-speed machines generate fewer particles of chemicals and dirt than high-speed buffers.
  2. Use a vacuum attachment to the buffing machine whenever available.



### **Reducing Microbial Growth through Proper Cleaning**

The following are basic guidelines to minimize the need for antimicrobial products:

- A. Clean first and then apply disinfectant:
1. Most disinfectants are not cleaners, and are usually only effective on a clean surface.
  2. Wait the recommended time before rinsing the antimicrobial solution from the surface (usually at least 10 minutes).
- B. Use disinfectants only when and where required:
1. Ordinary detergents typically remove more microbes than disinfectants.
- C. Disinfect mop heads and sponges daily to reduce microbial growth.
- D. Change cleaning water frequently (water used in mop-buckets, etc.) daily at a minimum or as water becomes cloudy.

1. Do not waste water by overfilling mop buckets, etc.
- E. Clean areas where water collects and condenses on a regular basis:
  1. Address areas such as refrigerator and air conditioner pans as well as air cleaner/humidifier machines.
- F. Use a drain maintainer (containing enzymes) if drains clog or have odors.
- G. Food prep areas should be cleaned with antimicrobial soaps and/or disinfectants.

### **Special Treatment of Carpets**

Carpet can be a source of biopollutants, dust, and volatile organic compounds (VOCs). Pesticides and cleaning products (such as stain removers) that remain on the carpet after initial application can volatilize (rise up into the air) over time and contaminate the indoor air.

The following carpet treatment specifications should mitigate the need for extensive carpet cleaning solutions through both preventative and prescriptive treatment.

- A. Prevent stains:
  1. Clean up spills promptly using cold water and one or more blotting cloths.
  2. Ensure the availability of spill kits to cleaning personnel.
- B. Promptly clean and thoroughly dry carpets if they should become saturated with water
  1. Quick action following a leak or other water damage may prevent carpet loss and the growth of mold and/or mildew. (Do not attempt to clean a moldy carpet without proper protective equipment, clothing, respirators, and air filters. Special training may be required to adequately deal with a water-soaked carpet.)
- C. Avoid excessive use of carpet shampoos and bonnet cleaning products. Bonnet cleaning involves the use of cotton, rayon, and/or polypropylene pads and a rotary shampoo machine. Although these chemicals are usually mild, overuse makes more frequent extraction cleaning necessary.
- D. Deep-clean when necessary.
  1. Periodic deep cleaning of carpet is necessary to extract dirt, biopollutants, moisture, and embedded cleaning agents.
  2. Use a wet vacuum water extraction machine after dry vacuuming.
  3. Reduce the amount of chemicals needed by applying sprays carefully and leaving on long enough.
  4. The Carpet and Rug Institute recommends rapid drying of the carpet, within 24 hours.



### **Janitorial Training Requirements**

- A. Basic Janitorial Training:
  1. Cleaning contractor should provide janitorial workers with the requisite training, including the Green Cleaning specifications delineated in C&W's Green Cleaning Policy.
  2. A minimum of 8 hours of documented training per year per employee is required.

3. 100% of custodial staff will participate in training.
- B. Training should include:
1. Providing and explaining the material safety data sheets (MSDS) for products used on site on an annual basis
  2. Introducing new products as required.
  3. Compliance with Green Seal's GS – 37 standard.
  4. Use and wear of Personal Protective Equipment.
  5. Compliance with C&W's product reporting requirements.
  6. Training in the potential hazards, correct use, maintenance, recycling and disposal of cleaning chemicals and equipment, including their packaging.
  7. Training in the use of chemical concentrates and appropriate dilution strategies to minimize chemical use when possible.
  8. Training in the use of sustainable cleaning materials and products covered under LEED for Existing Buildings Operations and Maintenance IEQ credits 3.3 & 3.6 and on the use of cleaning equipment covered under LEED for Existing Buildings Operations and Maintenance IEQ credit 3.4.
- C. Provide site manager or authorized employee with monthly training logs indicating the attendees and the training topic.

### **Chemical Storage Guidelines**

- A. Chemicals stored in the janitor's closets (or other approved storage area) must have a locked container which encloses the liquid cleaning products and delivers proper specified measurement for dilution.
- B. The solutions used are all to be stored in the janitor's closet(s) and the janitorial staff must follow the below guidelines:
1. Material Safety Data Sheets (MSDS) must be available to all employees.
  2. All containers must be properly labeled by the manufacturer to be easily identifiable.
  3. All cleaning products must be properly and safely stored in compliance with MSDS
  4. No liquids will be placed on shelves above eye level.
  5. Cleaning personnel must use appropriate Personal Protective Equipment.
  6. Chemical dilution systems must be adhered to.
  7. Only the necessary amount of chemicals should be stored in the janitor's closet. Bulk chemical storage should be maintained at an appropriate offsite location.
  8. Only authorized employees will have access to the main storage room.



### **Cleaning Equipment Standards and Specifications**

Performance Metrics and Measurement – 425 Market encourages the purchase and use of cleaning equipment by Able Janitorial that minimizes building occupant and maintenance staff exposure to hazardous noise levels, physical danger and poor air quality. All newly acquired cleaning equipment shall comply with the criteria listed below. The Custodial Services Supervisor of Able will track the percentage of all equipment that meets the criteria, based on cost or number of pieces of equipment. At least 25% of the equipment were compliant by October 1st 2014, with a target of 100% of equipment in compliance by October 1, 2015 and



100% compliance be maintained indefinitely. The LEED for Existing Buildings IEQ credit 3.4 has been used as a reference to develop the standards below, which will guide preferred product selection and purchases:

- A. Vacuum cleaners should meet the requirements of the Carpet & Rug Institute Green Label Program and must be designed to capture 96% of particulates 0.3 microns in size and operate with a sound level less than 70dBA. Proof of compliance to be provided by the equipment specification or cut sheet and delivered by the cleaning contractor.
- B. Hot water extraction equipment for deep cleaning carpets should be capable of removing sufficient moisture such that carpets can dry in less than 24 hours.
- C. Powered maintenance equipment including: floor buffers, burnishers and automatic scrubbers should be equipped with vacuums, guards and/or other devices for capturing fine particulates, and operate with a sound level less than 70dBA. Proof of compliance should be provided by the equipment specification or cut sheet and delivered by the cleaning contractor.
- D. Propane-powered floor equipment is not to be used unless deemed appropriate by site conditions, in which case they should have efficient, low-emissions engines that meet the California Air Resources Board (CARB) or EPA standards for the appropriate engine size and should not operate above 90dBA.
- E. Automated scrubbing machines are to be equipped with variable-speed feed pumps to optimize the use of cleaning fluids.
- F. Battery-powered equipment is to be equipped with environmentally preferable gel batteries.
- G. Where appropriate, active micro fiber technology is to be used to reduce cleaning chemical consumption and prolong life of disposable scrubbing pads.
- H. Powered equipment is to be ergonomically designed to minimize vibration, noise and user fatigue.
- I. Equipment is to have rubber bumpers to reduce potential damage to building surfaces.
- J. Cleaning contractor should keep a log for all powered housekeeping equipment to document the date of equipment purchase, repair and maintenance activities and the respective vendor cut sheets for each type of equipment mentioned in the logbook.

### **Green Cleaning – Implementation of Standard Operating Procedures**

Cushman Wakefield encourages the creation of Standard Operating Procedures that describe how the building's cleaning and floor and carpet care systems will be developed, implemented, enforced and audited on a consistent basis. The SOPs will promote the following strategies:

- A. The reduction or elimination of potentially hazardous chemicals
- B. The removal of particulate contaminants

- C. The preservation of building surfaces from harm during cleaning
- D. The reduction of contaminant entry into the building

### **Hand Hygiene**

Healthy hand hygiene should be promoted by providing soap and soap dispensers in janitorial closets, kitchen areas, bathrooms, break rooms and locker rooms. Custodial vendors are required to wash their hands on a routine basis while servicing the facility.

### **Occupant Feedback**

Occupant feedback shall be provided through direct communication via telephone, e-mails or a web-based service request program (ie: Work Speed) to C&W. Able Building Maintenance through direction of C&W shall respond to occupant requests on an as-needed basis.

### **Vulnerable & Sensitive Populations**

C&W shall record and account for the presence of vulnerable and sensitive populations. C&W shall take adequate precautions in relation to the cleaning procedures and products to facilitate a healthier environment for this population. C&W shall work closely with Able Building Maintenance to determine that cleaning products meet LEED EBO&M requirements EQc3.4-3.6 and ensure that cleaning procedures adhere to C&W Green Cleaning Policy. C&W shall meet with Able Building Maintenance at minimum annually to review cleaning products and procedures, and cleaning audits shall be conducted routinely to assess the quality of the custodial services. Cleaning staff from Able shall use only low/no VOC cleaning products; they shall perform routine cleaning and floor restoration activities after working hours when the majority of occupants have left the building; the staff shall limit the number of cleaning chemicals used in the building; and they shall maintain a high level of cleanliness thus minimizing the presence of irritants.

Building occupants are highly encouraged to report any outstanding custodial issues to C&W. New technologies for environmentally sensitive cleaning will be continuously monitored and assessed as they become available and adopted when they are applicable. Similarly, this policy will be updated as needed to ensure that current and successful procedures are being carried out. Should any cleaning products and procedures adversely affect these populations, the issue shall be resolved on a case by case basis where sensitivities of occupants take precedence.

### **3.0 Period of Sustainable Purchasing Policy Implementation:**

C&W began implementation of the Green Cleaning Policy on September 1, 2009. The policy will remain in effect into perpetuity for the LEED for Existing Buildings Operations and Maintenance program at this facility.

### **4.0 Responsible Party:**

Able Building Maintenance and the building facilities team at 425 Market Street Building will include management of its cleaning and janitorial maintenance services with overall risk



reduction in mind and promoting a safe and effective work environment. Current Building Manager James Kilroy has direct management of the building facilities team. All operations must meet federal and local regulatory requirements at a minimum.

#### **5.0 Goals & Policy Performance Measurement:**

The prescriptive requirements set forth by The [U.S. Green Building Council's \(USGBC\) LEED EB: O&M rating system](#) was used as a framework of reference for determining the performance measurement criteria. This is based on ABLE Low Environmental Impact Cleaning Program cleaning practices that will be used in development and selection of contractual requirements and specifications with detailed processes and procedures, which is highlighted and documented as required to show as evidence of the successful implementation – included in the ABLE Low Environmental Impact Cleaning Program. The low environmental impact cleaning program is 100% implemented at the 425 Market Street building. Practice and product effectiveness is determined on a case by case basis and reported to Building Management.