



The behaviors of White Stag Block building users are equally as important to the buildings' sustainable functioning as the materials and resources used in the renovation process, the buildings' water efficiency, and the buildings' energy performance. The products used in building maintenance have a large impact on building users and the environment. Cleaning products and other chemicals employed in building maintenance can expose building occupants and users to physical, chemical and biological pollutants that can have detrimental affects on indoor air quality, human health, and the environment. In addition, the chemicals used in building maintenance can have negative impacts on building systems and finishes. For these reasons, the implementation of green housekeeping techniques is important.

Green housekeeping is a component of the White Stag Block's United States Green Building Council Leadership in Energy and Environmental Design (LEED™) Gold certification. Venerable Properties has officially adopted a green housekeeping policy, which applies to all employees and contractors. As a result, the White Stag Block renovation project has received the one possible Innovation & Design point for "Green Housekeeping" (IDc1.2).

The green housekeeping products and techniques used are based on LEED requirements, as specified by the U.S. Green Building Council in conjunction with the State of Oregon. This includes the green housekeeping policy, as well as product-specific professional development for custodial staff. The green housekeeping policy for the White Stag Block is designed to minimize the use of toxic chemicals and protect human health, while also ensuring a high level of cleanliness and attractiveness within the buildings.

The efficient use of sustainable cleaning systems, products, and maintenance, as well as their reuse, recycling, and proper disposal are all considered.

The minimization of waste from the maintenance chemicals and associated packaging are also considered. Various organizations have tested and approved specific products and equipment for LEED green housekeeping, and the White Stag Block uses those products that are Green Seal GS-37 approved and/or meet the California Code of Regulations.

Cleaning products are bio-based, non-toxic, fragrance-free, have a pH between 4 and 9, and have low levels of volatile organic compounds (VOCs). Products may not contain: carcinogens, mutagens, teratogens, ozone-depleting compounds, greenhouse gasses, dyes, petroleum distillates, endocrine modifiers, alkyl phenyl ethoxylates, dibutyl phthalate, heavy metals, more than 0.5% phosphorous, chlorinated solvents, or contribute to petrochemical smog or poor indoor air quality. In addition, concentrated products are used and properly diluted to reduce impacts to human health and the environment. Paper products are 100% recycled content and include post-consumer waste. The U.S. Environmental Protection Agency's Comprehensive Procurement Guidelines are employed in the use of paper products and trash bags. Re-usable/washable rags and mops are used, which are effective and do not shed fibers. Vacuums have HEPA filters, which reduce dust in the building. The focus is on the reduction of overall use. In general, products used should degrade rapidly, should not harm human health, should not pollute the air or water supply, and should present an economically sound cost of usage.

~ Diana Fischetti and John Wallace

Photos: Ray Neff, Jessica Engeman, Casey Kleinhenz, Andre Chinn

Graphic Design: Ray Neff

#### References Cited

- Bay View Building Maintenance, Inc. 2008. "Green Cleaning Procedures."
- Spencer, Bob. 2008. Maintenance Supervisor, Venerable Group, Inc. Portland, OR.