

Sustainable Practices for the Building Manager Lawyer's Annotated Version¹

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CURRENT BUILDING MANAGEMENT PRACTICES

REDUCING WASTE

- Toilet paper and paper towels have at least 50% post-consumer recycled content.
 - *Purchasing recycled products creates a demand for them, making recycling possible and thereby saving trees. "Post-consumer" means that the recycled content has been used by a consumer and returned. Without that qualifier, "recycled" could simply refer to factory scrap that never left the manufacturing plant.*
- Janitorial staff has been instructed to allow full use of toilet paper rolls.
 - *Some janitorial staff routinely discard partially used toilet paper rolls..*
- Recycling containers have been provided in copy rooms for newspapers and magazines.
- Containers for glass/plastic bottles and aluminum/tin cans have been provided in kitchen.
- Arrangements have been made with hauler to collect all the items the city requires the hauler to collect if requested by customer, and space is provided for short-term storage.
 - *In Portland the haulers are required to collect office paper, cardboard, newspaper, magazines, phone books, glass, plastic bottles, tin cans (including aerosols), milk cartons, and scrap metals if requested by the building manager.*
- Fluorescent lights, batteries, old paint, and scrap metal including wire are recycled.
 - *Lights, batteries, and paint contain heavy metals, which are very harmful if they get into the environment. (Philips sells the lowest mercury-content bulbs.)*
- All organic materials are composted.
 - *Landscaping debris can be delivered to a yard debris compost site. The City of Portland has a food waste collection system for cafeterias.*

AVOIDING TOXIC CHEMICALS AND AIR POLLUTION

- Cleaning supplies are certified by Green Seal or meet US EPA's Design for the Environment standard.
 - *Typical cleaning supplies used by a janitorial service in offices are restroom disinfectants, all-purpose cleaners, glass cleaners, carpet cleaners, floor finishes, and floor strippers. Conventional cleaners contain chemicals that can harm humans who breathe them or harm aquatic life when they go down drains. Green Seal is a nonprofit organization that establishes environmental and health*

¹ Some information is specific to Portland, Oregon.

standards and then certifies products based on those standards. The EPA's Design for the Environment standard is more rigorous than the Green Seal standard.

- ❑ Janitorial staff has been trained in the benefits of non-toxic cleaners.
 - *If janitors are to accept new products, they need to understand the reasons for change. They also need to be instructed in using the products safely and in proper amounts.*
- ❑ Architectural sealers, primers, and paints meet Green Seal requirements, www.greenseal.org/certproducts.htm#paints.
 - *These products can emit harmful fumes.*
- ❑ Interior adhesives and sealants are low-emitting and meet the VOC limits of the South Coast Air Quality Management, Rule #1168, www.aqmd.gov/rules/index.html.
 - *These products can emit harmful fumes.*
- ❑ At least 50% of paper products used in restrooms have not been bleached with chlorine.
 - *The chlorine bleaching process produces dioxins, which are extremely toxic. Paper mills can use other bleaches, such as hydrogen peroxide. Only virgin fiber is bleached. Thus, if the paper has post-consumer recycled content, that portion will not have been bleached a second time.*
- ❑ Soap in bathrooms has no antimicrobial agents.
 - *Antibacterial agents are not necessary for cleaning hands; such agents can produce bacteria resistant to antibiotics.*
- ❑ If landscaping is present, only organic fertilizers and pesticides are utilized.
- ❑ For landscape maintenance, two-stroke engine equipment is not allowed; propane, electric, or manual equipment is used wherever possible.

REDUCING ENERGY AND WATER USAGE

- ❑ An energy audit that includes lighting systems and HVAC systems has been conducted by the Energy Trust of Oregon, 503-243-3642 (or equivalent third party). An alternative is to have PGE conduct a "scoping walkthrough" to identify energy efficiency opportunities, 503-464-8029.
 - *The Energy Trust of Oregon receives money from a tax on utility bills and uses it for efficiency and conservation programs. An audit will make recommendations for improvement, suggest payback times, and give information about incentives. Some managers prefer the energy experts at the utility company.*
- ❑ Interior lights throughout the building, except exit lights, are turned off at night.
 - *The fire department requires that exit lights be left on.*
- ❑ Ambient light levels in office spaces have been adjusted to 1.4 watts per square foot by eliminating bulbs or lowering their wattage.
 - *Many offices are overlit because they were designed before the computer age. The most efficient systems lower overhead lighting and provide task lighting where needed.*
- ❑ Blocks of new wind energy have been purchased for at least 6% of electrical usage.

- *When customers purchase these blocks, the utility will use the revenue to purchase green tags. Electricity from new wind turbines is sold into the grid along with regular power, but the generator can also sell the green tags, thus receiving a premium for green power.*
- ❑ All faucets have aerators (1 gpm or less), and showerheads are low-flow (2.5 gpm or less).
 - *These devices reduce the amount of water used by infusing air to keep the pressure strong.*
- ❑ Energy and water consumption is tracked and reported to tenants.
 - *If tenants have made changes to save energy and/or water, they appreciate seeing the results.*
- ❑ Air conditioning is not used after hours.
- ❑ If lawn is present, it is not watered.
 - *Grass is an annual plant that will resprout in the spring.*

Retrofits

REDUCING ENERGY USAGE

- ❑ Tenant space has been sub-metered for electricity use. Tenants receive monthly reports on usage, and those that use more than a standard amount pay extra.
 - *Generally, a tenant doesn't know how much electricity it is using. Sub-metering allows an office to be informed of and have control over its consumption.*
- ❑ Efficiency upgrades identified by energy audit have been carried out.
- ❑ Linear fluorescent lighting has been upgraded to T-5s or T-8s with electronic ballasts.
 - *These are more efficient than standard lamps and ballasts.*
- ❑ Compact fluorescent lights have been installed where appropriate.
 - *These use about a quarter of the electricity and last ten times as long as incandescent lights.*
- ❑ Exit signs have been upgraded to LED or cold cathode (neon) lighting.
 - *These are more efficient.*
- ❑ Occupancy-based controls have been installed for heating/cooling.
 - *When occupant-regulation replaces automatic regulation, less energy is wasted.*
- ❑ HVAC system has been tested, adjusted, and balanced to verify that it is functioning as it was designed to function.
 - *Problems can develop in the system over time, and the configuration can get out of synch with occupancies as tenants change partitions.*
- ❑ HVAC system has been upgraded to variable air volume system and/or includes an economizer.
 - *A system that provides heating/cooling based upon need is more efficient than one that is constant. An economizer makes use of outside air to cool a building.*
- ❑ Filters with a MERV (minimum efficiency reporting value) rating of 8 or higher have been selected installed in the HVAC distribution system.

- *Filters should be able to remove particulates in the 3-micron and smaller range to protect human health.*
- ❑ An individual lighting control system has been installed in office areas, and lighting in hallways is on banks of switches so sections of lighting can be turned off as needed.
 - *If banks of lights are turned on when light is needed for only one space, energy is wasted. They also generate excess heat.*
- ❑ Windows and window-shading devices have been upgraded to minimize winter heat loss and summer heat gain.
 - *Replacing windows, adding special film to the inside surface, or installing shading devices can reduce energy used by the HVAC system.*
- ❑ Appliances in the kitchen have an EPA Energy Star label or equivalent energy efficiency features.
 - *Energy Star means that the product meets energy efficiency guidelines set by EPA and the Department of Energy.*
- ❑ For bike commuters, the building provides free showers and a secure bike storage site.
- ❑ Turf has been established on roof to provide insulation and reduce storm water runoff.
 - *The city can provide technical expertise, 503-823-7267.*

REDUCING WATER USAGE AND PREVENTING CONTAMINATION

- ❑ Toilets are low-flush (1.6 gallons per flush) or dual flush.
 - *Conventional toilets are 4.5 gallons per flush so new toilets save significant amounts of water.*
- ❑ Waterless urinals or urinals using no more than 1.0 gallons per flush have been installed.
- ❑ If landscaping is present, plants require no watering, or low-volume drip irrigation is used.
- ❑ Rainwater is captured for reuse in irrigation or toilets.
 - *The city's Green Building Services can provide technical expertise, 503-823-7222.*
- ❑ Storm water is handled on site rather than going into the storm water system.
 - *Storm water contaminates the river.*



*Oregon Lawyers for a Sustainable Future is a project of the Center for Earth Leadership.
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