



# BOMA BOSTON SUSTAINABILITY BEST PRACTICES

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## DIFFICULTY SCHEDULE

- Level 1: No Cost/Low cost
- Level 2: Low Cost/Medium Cost
- Level 3: Medium Cost/High Cost

*BOMA Boston provides these Sustainability Best Practices as recommendations and a resource for its membership. BOMA Boston does not recommend specific service providers or consultants to assist with these Best Practices. Special thanks go to the BOMA Boston Sustainability Committee for working tirelessly to compile these Sustainability Best Practices.*



# BOMA BOSTON SUSTAINABILITY BEST PRACTICES

## CATEGORY SUSTAINABLE SITES DIFFICULTY

### **Best Practice** *Integrated Pest Management*

<b>Strategies</b>	Review contract and determine which pests are covered and what treatments are prescribed for each pest by the treatment company (example, are control services limited to pesticide application with little or no inspection of potential trouble spots?)	<b>Level 1</b>
	Collect MSDS sheets for all chemicals used by the pest management company	<b>Level 1</b>
	Conduct frequent inspection of the facility to determine which pests are encountered and their potential route of entry	<b>Level 1</b>
	Review service logs to determine pests encountered in the past and their frequency	<b>Level 1</b>
	Develop a plan, identifying encountered pests, their origins and routes of entry to the building, and treatment options (including, biological, cultural, physical and chemical options that minimize economic, health and environmental risks)	<b>Level 2</b>
	Specify strict controls on the use of any chemical treatments for pests, including documenting all aspects of the pests identified, treatments utilized to date, authorization, MSDS, communications to tenants and service performed (specifying chemicals used and their quantity)	<b>Level 2</b>

### **Best Practice** *Alternative Commuting Transportation*

<b>Strategies</b>	Encourage ride sharing – carpools/vanpools	<b>Level 2</b>
	Provide priority parking with signage for zero/low emissions and hybrid vehicles	<b>Level 2</b>
	Consider offering alternative work schedules – staggered start/stop times to reduce rush hour congestion; 4 day work weeks (10 hours per day); etc	<b>Level 2</b>
	Install bicycle racks and shower facilities for facility occupants to encourage bicycling to work	<b>Level 3</b>



**Best Practice** *Building Exterior Management Plan*

- Strategies** Raise mowers to reduce clippings **Level 1**
- Conduct soil testing – adjust fertilization accordingly **Level 1**
- Use mowers with mulching blades – do not bag grass clippings or leaves **Level 2**
- Utilize reduced emission handheld equipment **Level 2**
- Specify used low VOC products, such as products that meet one of the following criteria: **Level 2**
- Green Seal Certified (GS-11)
  - California code of regulations for maximum allowable VOC leads
  - EPA Comprehensive Procurement Guidelines
- Implement an Integrated Pest Management (IPM) program **Level 3**
- Consider an irrigation feed system that uses captured rainwater, gray water or onsite treated waste water **Level 3**

**Best Practice** *Storm water Management*

- Strategies** Consider using rain water reclamation for bathrooms, cooling tower makeup, and irrigation **Level 3**

**Best Practice** *Heat Island Reduction - Roof*

- Strategies** Install Energy Star compliant, high reflective and high emissivity roofing material with a minimum emissivity of 0.9 according to ASTM408 for a minimum 75% of roof surface **Level 3**
- Install “GREEN” vegetated roof for 50% of roof area **Level 3**

**Best Practice** *Light Pollution Reduction*

- Strategies** Shield all outdoor luminaries (50 watts and over) so they do not directly emit light to the night sky **Level 2**

**CATEGORY WATER EFFICIENCY**

**Best Practice** *Water Performance Measurement - building metering*

- Strategies** Install main meter for the entire building water consumption **Level 1**
- Install water submeters on all ancillary loads like cooling towers irrigation, resturants, and bathrooms **Level 2**



**Best Practices Additional Indoor Plumbing Efficiency**

- Strategies** Install automatic water control systems in restrooms and break rooms **Level 2**
- Install water conserving plumbing fixtures that meet or exceed energy policy act of 1992 Standards **Level 2**
- Capture waste water from potable water purification system for cooling tower **Level 3**

**Best Practices Water Efficient Landscaping**

- Strategies** Conduct an irrigation audit to determine your water usage in comparison to other **Level 1**
- Install a drip irrigation system **Level 3**
- Consider an irrigation feed system that uses captured rainwater, gray water or onsite treated waste water **Level 3**

**Best Practices Cooling Tower Water Management**

- Strategies** Establish chemical management program for water treatment system **Level 1**
- Use rain water reclamation, evaporatransites for cooling tower make up **Level 3**

**CATEGORY ENERGY AND ATMOSHPERE**

**Best Practice Optimize Energy Efficiency Performance**

- Strategies** ENERGY STAR Benchmarking of building to determine baseline usage for future comparisons **Level 1**
- Installing occupancy sensors will reduce energy consumption in building spaces by automatically shutting off lights during periods of non-use **Level 2**
- Conduct a lighting retrofit that will replace all older lamps, ballasts, and fixtures **Level 3**
- A more efficient lighting system can improve occupant comfort, lower overall heat load and save energy through reduced cooling requirments **Level 3**
- Installing variable-frequency drives on pumps and fans save energy by allowing the volume of air or water to match the system demands **Level 3**
- If your electricity bill contains a power factor penalty or if you are charged for peak load measured in kVA, power factor correction can help you reduce such surcharges **Level 3**
- A buildings performance can be optimized through an energy management system (EMS) **Level 3**



**Best Practice Existing Building Commissioning - Ongoing Commissioning**

**Strategies** Retro-commissioning (RCx) is a systematic, documented process that identifies low-cost operational and maintenance improvements in existing buildings and brings the buildings up to design intentions of its current usage **Level 2**

**Best Practice Performance Measurement Metering**

**Strategies** Install separate, continuous metering of: lighting systems and controls; cooling loads; air and water economizer and heat recovery cycle operations; VFD operations; motor loads; boilers; building specific process energy systems **Level 3**

**Best Practices Renewable Energy**

**Strategies** Reduce air pollution and lessen the impact on the environment by purchasing electricity or energy credits from providers of renewable energy sources **Level 2**

Employ on-site nonpolluting renewable technologies that contribute to the total energy requirements of the building and site. Suitable systems are Photovoltaic (PV), Solar Thermal, Geothermal, Biomass Low-Impact Hydro Electric, Wave, Tidal and Wind **Level 3**

**Best Practices Refrigerant Management**

**Strategies** HVAC systems can account for up to 35% of a facility's energy usage. New chillers can be 30% to 40% more efficient over existing equipment. Choose equipment utilizing non-CFC refrigerants **Level 2**

**CATEGORY MATERIAL AND RESOURCES**

**Best Practice Sustainable Purchasing**

**Strategies** Specify coreless or recycled paper products (10% post consumer or 20% post industrial) **Level 1**

Document all purchases of cleaning chemicals and products. Indicate for each item purchased whether it meets one of the following standards: GREEN Seal Certified California Air Resource Board Volatile Organic Compounds Standards; EPA Comprehensive Procurement Guide **Level 1**

Reduced Mercury in Lamps, 70 pg/lum-hr **Level 1**

Specify cleaning chemicals that meet one of the following standards: GREEN Seal Certified (GS-37), California Air Resource Board Volatile Organic Compounds Standards; EPA Comprehensive Procurement Guide **Level 2**

Invest in specialized tools and equipment – for example, microfiber mops, bamboo mop handles, HEPA vacuums, etc **Level 2**

Develop a plan to reduce volatile organic compounds (VOC) in the project site; using either low VOC paints and solvents or by allowing off-gassing at another site before installing in the project area **Level 2**

Reduce the environmental impacts of materials acquired for use in the operations, maintenance and upgrades of buildings – such as: contains at least 70% salvaged material; contains at least 10% post consumer or 20% post industrial material; contains at least 50% rapidly renewable material; is Forest Stewardship Council (FSC) certified wood; contains at least 50% materials harvested and processed or extracted and processed within 500 miles of the project **Level 3**



**CATEGORY INDOOR ENVIRONMENTAL QUALITY**

**Best Practice Green Cleaning**

- Benchmark and track results – include tenant surveys, costs, etc **Level 1**
- Implement a training program for each worker on GREEN cleaning procedures and processes, with a minimum of 24 hours per year of training, in addition to other safety or work training **Level 2**
- Develop a cleaning plan and schedule for every area of the building, specifying the product, process and frequency of cleaning **Level 2**
- Document all purchases of cleaning chemicals and products. Indicate for each item purchased whether it meets one of the following standards: GREEN Seal Certified California Air Resource Board Volatile Organic Compounds Standards; EPA Comprehensive Procurement Guide **Level 2**
- Based on the purchasing documents above, determine what percentage of the total dollars spent were for products that met one of the above standards. Invest in specialized tools and equipment – for example, microfiber mops, bamboo mop handles, HEPA vacuums, etc. **Level 2**
- Specify Carpet and Rug Institute (CRI) certified vacuums and floor care equipment **Level 2**
- Specify use of pre-mixed and diluted chemical stations
- Implement an intermediate recycling program (cardboard and aluminum - see recycling section for more information in this guide) **Level 2**

**Difficulty Schedule**

- Level 1 - No cost-low cost**
- Level 2 - Low cost-med cost**
- Level 3 - Med cost-high cost**