

ENDLESS OPPORTUNITIES

SUSTAINABLE PRACTICES GUIDE



CONTENTS

- 05/ SUSTAINABILITY CHECKLIST
- 08/ CONSIDERATIONS WHEN LIGHTING YOUR SPACE
- 10/ CONTROL TEMPERATURE WITH EFFICIENT HVAC
- 12/ SAVE MORE WATER
- 14/ REDUCE WASTE BY REUSING & RECYCLING
- 16/ TIPS FOR DESIGN & CONSTRUCTION OF INTERIORS
- 18/ TIPS FOR FOOD SERVICE & RESTAURANTS
- 21/ RESOURCES FOR MORE INFORMATION





Sustainable Practices Create

ENDLESS OPPORTUNITIES

It's impossible not to have an impact in the world. Consumption is essential to life, and its by-products are inevitable. What is possible is making conscious decisions to reduce our carbon footprint. While we are currently carbon neutral in common areas we control, our goal at EDENS is to work with our retail partners to achieve carbon neutrality throughout all the space we own by 2026. The opportunities are endless; together, we are committed to establishing building blocks today for a thriving, sustainable community of tomorrow.

SUSTAINABILITY CHECKLIST

WHAT YOU CAN DO TODAY

- ☐ **RENEWABLE ENERGY:** Purchase renewable energy credits or source green power from utility company to offset carbon emissions.
- ☐ **LIGHTING:** Turn off lights in unoccupied rooms. Replace non-led lamps with LED lamps.
- ☐ **HVAC:** Change filters regularly. Keep vents closed in unoccupied areas to prevent heating and cooling of storage areas and closets.
- ☐ **WATER:** Install inexpensive, water-efficient aerators in faucets.
Use EPA watersense labeled products.
- ☐ **WASTE:** Establish a recycling program for all applicable waste and provide recycling containers.
- ☐ **INTERIORS:** Use NO volatile organic compounds (VOC) paints, coatings adhesives and sealants on all interior surfaces. (GREENGUARD and Green Seal-certified products are preferred.)
- ☐ **OPERATIONS:** Contact utility providers to determine availability of free on-site energy analysis and financial incentives to reduce energy consumption and costs.
- ☐ **MANAGEMENT:** Use ENERGY STAR Portfolio Manager to measure and monitor building energy, water, and waste usage / generation and costs and conservation efforts being implemented.
- ☐ Use only energy star® labeled products & appliances.



Mosaic artificial turf requires no watering, no mowing and no feeding.

The goal of the EDENS Sustainable Practices Guide is to educate and encourage our tenants and vendors to embrace more sustainable practices in the design and operation of their business. In addition to reducing consumption of natural resources and minimizing waste production, these measures have the opportunity to create economic benefits for your business and customers by reducing operating costs and enhancing building performance. Formally recognizing that climate change is a reality, this guide will help reduce the carbon footprint of your business.

On the following pages you will find requirements (**reQs**) and recommendations (**reCs**) specific to store design, construction and operations. These practices are intended to help you realize cost-effective solutions to energy efficiency, indoor air quality and natural resource conservation, while helping to create retail facilities that are more economical, durable and efficient, and healthier environments in which to work and shop.

The EDENS Sustainable Practices Guide is not intended to eliminate or change provisions of any lease document and may not be applicable to all retailers. These **reQs** and **reCs** are not all-inclusive and may be expanded, altered or revised periodically.

Not unlike the constant change we see in the retail industry, opportunities to create a more sustainable environment emerge daily. Therefore, we are dedicated to periodically reviewing our practices and updating them accordingly.

reQs

REQUIREMENT

SOMETHING THAT IS REQUIRED;
A NECESSITY.

For EDENS, a sustainability practice requirement is expected to be standard practice and takes zero to minimal investment.

reCs

REC.O.M.MEN.DA.TION

SOMETHING RECOMMENDED, ESPECIALLY
A FAVORABLE STATEMENT CONCERNING
CHARACTER OR QUALIFICATIONS.

For EDENS, a sustainability practice recommendation may have a longer ROI and is suggested to retailers who want to take sustainability practices to the next level.



lighting

FACTS & FIGURES

- Lighting alone creates 17% of carbon emissions.
- ENERGY STAR® certified bulbs LEDs use up to 90% less energy than standard incandescent bulbs and last 15 times longer.
- Lighting accounts for 20-50% of electricity consumption of most businesses.
- An incandescent lamp uses more energy emitting heat than light with 95% of the input lost in waste heat.
- ENERGY STAR® EXIT signs use 3 to 8 times less energy than incandescent and fluorescent signs.
- The most efficient light is the light not used—dimmers, motion sensors and photocells control when and how much light is really necessary.
- Daylighting not only saves money but also improves employee productivity and store sales.
- Occupancy sensors and dimmers in back rooms, restrooms and storerooms can reduce lighting costs up to 40%.



CARBON IMPACT

A 2017 study showed LED lighting reduced carbon emissions by 570 million tons, **the equivalent of greenhouse gas emissions from 4.7 billion miles driven by an average car.**

reQs

REQUIREMENTS

- **Replace incandescent lamps with LED lamps.**
- Turn off lights in unoccupied rooms.
- For fixtures install the latest upgrades in LED technology.
- Install dimmers and sensors to turn off lights in unoccupied rooms, particularly in areas such as bathrooms, copy rooms and storage rooms.
- Turn off lights at the end of the day.
- When possible, rely on small, task lighting rather than overhead lights.
- Recycle used bulbs including fluorescents as they contain mercury.

reCs

RECOMMENDATIONS

- Replace all non-LED lights with LED.
- Paint dark walls and ceilings with lighter colors to maximize the effect of existing lighting.
- Install skylights or other windows to increase natural daylight.
- Connect toilet room exhaust fans to the light switch to ensure shut off.



HVAC

FACTS & FIGURES

- Heating, ventilation and air-conditioning (HVAC) systems account for 40% of the electricity used in commercial buildings.
- Even if your air conditioner is only 10 years old, you may save 20% on your cooling energy costs by replacing it with a newer, more efficient model.
- Every one degree of cooling increases energy use by 4-5%. e.g. Cooling to 73 degrees instead of 76 degrees uses 12-15% more energy.
- Installing an ENERGY STAR® programmable thermostat to automatically control temperature settings will save 10-70% on heat and cooling costs.



CARBON IMPACT

2° down in the winter and 2° up in the summer can reduce your carbon footprint by 2,000lbs per year. **The equivalent of CO₂ emissions from 136 propane cylinders used in home BBQ's.**

reQs

REQUIREMENTS

- **Keep vents closed in unoccupied areas to prevent heating and cooling of storage areas and closets.**
- Use high-efficiency filters and replace every 90 days. Post schedule on equipment.
- Set thermostat below 70 degrees in winter and above 75 degrees in summer.
- Clean condenser coils once a year.
- Maintain HVAC equipment by performing scheduled maintenance and preventive maintenance checks. Check insulation on ducts and pipes for damage.
- New HVAC systems shall be powered entirely by electricity (a potentially renewable energy) rather than natural gas (a non-renewable fossil fuel).
- Program appropriate night setback temperatures for HVAC.

reCs

RECOMMENDATIONS

- Add an AC variable drive.
- Install programmable thermostats to ensure air temperatures are regulated.
- Install thermostat that can schedule fan operation and heating and cooling settings independently.
- Protect thermostat settings by installing tamper-proof covers.
- Install ceiling fans to reduce the need for air conditioning.
- Consider replacing HVAC systems older than 10 years.
- Engage a commissioning agent to verify the mechanical, electrical, and plumbing systems are performing as designed and meeting energy goals.



water

FACTS & FIGURES

- A faucet leaking just a tenth of a gallon of water a minute wastes 50,000 gallons or more of water per year.
- Repairing a leaky water pipe can save thousands of gallons of water annually.
- A 125-seat restaurant serving 225 meals per day uses about 200,000 gallons of water per year.
- Installing waterless urinals can save 40,000 gallons of water annually.
- By 2025, 4 billion people – half the world's population— will live in severe water stress conditions.
- Installing an inexpensive, water-efficient aerator in faucets can save as much as a gallon of water per minute.



CARBON IMPACT

The CO₂ embedded in the nation's water represents 5% of all U.S. carbon emissions and **equates to the emissions of over 62 coal fired power plants.**

reQs

REQUIREMENTS

- **New water heaters shall be powered entirely by electricity (a potentially renewable energy) rather than natural gas (a non-renewable fossil fuel).**
- Install inexpensive, water-efficient aerators in faucets.
- Insulate hot water pipes and tank.
- Use cold tap water if possible.
- Lower the water heating thermostat by a few degrees or to the lowest effective temperature.
- Check for leaky toilets by placing a small amount of food coloring in the tank.
If you see the coloring in the toilet bowl 20-30 minutes later, you have a leak.
- Maintain hot water fixtures and plug leaks as they occur.
- Flush out storage-type water heater tanks annually to prevent sediment build-up.
- Turn off hot water heater when not in use (i.e. on weekends in some facilities) or when hot water use is not needed for two days or more.
- Train store employees to use water conservatively, especially hot water.
- Install/use foam soap dispensers.
- New plumbing fixtures shall be high efficiency with the following flow rates: pantry / breakroom faucet 1.00gpm, water closet 1.28 gpf, urinal .125 pgf (or waterless), lavatory faucet .5gpm.

reCs

RECOMMENDATIONS

- Search "www.lookforwatersense.epa.gov/rebates" to find incentives and rebates for plumbing fixtures.
- Use EPA WaterSense-labeled plumbing fixtures.
- Install faucets and flush valves with sensors.
- Install tankless electric water heaters.
- Filter tap water which reduces use of bottled water.
- Use native plants in planters.



waste

FACTS & FIGURES

- Americans throw away enough aluminum in three months to rebuild all of our commercial airplanes.
- The energy saved by recycling one aluminum can runs a television for three hours.
- Between 1970 and 1991, paper consumption in the U.S. doubled. Decomposing paper sitting in landfills releases methane gas which is 30 times more potent than carbon dioxide.
- Landfills are the third largest source of methane gas emissions in the U.S.
- Every year Americans throw away enough office and writing paper to build a wall 12 feet high from LA to New York City.
- Recycling one ton of paper saves one acre of trees.
- The energy saved from recycling one glass bottle can light a 100-watt bulb for four hours.
- The post-consumer plastics recycling industry provides jobs for more than 52,000 American workers.



CARBON IMPACT

Landfill methane (50% of landfill gas emissions) produced over 103 million metric tons of CO₂ equivalents. **This is the same as the CO₂ captured by 134 million acres of U.S. forests in a single year.**

reQs

REQUIREMENTS

- **Establish a recycling program for all applicable waste and provide recycling containers.**
- Recycle used fluorescent lamps – a law in most states (they contain mercury).
- Reuse/recycle cardboard boxes, plastic containers and glass bottles.
- Compost food waste if opportunity exists.
- Print on both sides of paper.
- Buy products that are manufactured using recycled materials.
- Recycle old and/or used computer monitors, hard drives, cell phones and other electronics through equipment manufacturers or stores; many have take-back programs that offer cash rebates or discounts on new equipment.

reCs

RECOMMENDATIONS

- Encourage customers to bring/use reusable bags.
- Do not provide plastic shopping bags.
- Eliminate plastic straws.
- Use core-less toilet paper.



interiors

FACTS & FIGURES

- In the U.S. buildings consume 72% of our electricity and 14% of our potable water.
- 39% of carbon dioxide emissions are produced by buildings in operation.
- In the U.S., people spend, on average, 90% or more of their time indoors. Green buildings typically have better indoor air quality and lighting.
- The benefits to building green include decreased operating costs, increased building value, higher return on investment and enhanced productivity and morale.



CARBON IMPACT

Every cubic meter of wood stores roughly 0.9 tons of CO₂, and building with wood extends the time that this CO₂ is kept out of the atmosphere.

This is the equivalent of CO₂ emissions from 91.9 gallons of gas consumed.

reQs

REQUIREMENTS

- Use low or no volatile organic compounds (VOC) paints, coatings adhesives and sealants on all interior surfaces. (GREENGUARD and Green Seal-certified products are preferred.)
- Use only Gypsum Wall Board (GWB) manufactured in the U.S. and mold resistant GWB in areas exposed to moisture.
- Use formaldehyde-free, high recycled content fiberglass batt insulation or equivalent.
- If existing ceiling tiles are not salvaged and reused, use new ceiling tiles that have at least 50% recycled content.
- Use urea/formaldehyde-free composite products for solid surfaces.

reCs

RECOMMENDATIONS

- Use materials, furniture and fixtures that contain a recycled content above 50% and are produced locally.
- Use Forest Stewardship Council (FSC) certified wood whenever possible.
- Use Carpet & Rug Institute Green Label/Green Label Plus-certified carpet, pads & adhesives.
- Use non-toxic products from renewable sources in hard-surface flooring (these include concrete, linoleum, cork, ceramic/porcelain tile, wood, bamboo or rubber).
- Use GREENGUARD-certified solid surfaces and furnishings.
- Install entryway systems that prevent dirt and particulates from entering the space. Use a permanent walk-off mat or a roll-out mat (cleaned weekly and made of a sustainable material).
- Use LEED Accredited Professional (AP) whenever feasible.



restaurants

FACTS & FIGURES

- By leaving the broiler turned off for one extra hour a day, a restaurant can save \$450 annually.
- If a restaurant cuts its energy costs by 20%, profits could increase 30% or more.
- If every U.S. restaurant cut its energy consumption by 20%, the industry could reduce its energy costs by \$1.6 billion per year.
- An ENERGY STAR®-qualified refrigerator and freezer can save over 45% of the energy used by conventional models.
- Low-flow spray valves can save a restaurant up to \$1,000 per year, and some states require pre-rinse spray valves for new purchases.
- Restaurant cooking oil can be converted to biodiesel fuel for powering automobiles which is why many restaurants are already using their own leftover oil and grease as fuel to run their delivery trucks or store vehicles.
- Over 25% of all prepared food goes uneaten every day. This waste can be reduced by donating edible food leftovers to shelters, soup kitchens and food pantries which saves space in landfills while generating goodwill and potential tax benefits.



CARBON IMPACT

Installing just one high efficiency pre rinse spray valve could save approximately 50,000 gallons of water and 10,000 kWh a year.

Equivalent to CO₂ emissions from charging 901,704 smartphones.

reQs

REQUIREMENTS

- **Install ENERGY STAR® appliances, electronics and other EPA-tested equipment.**
- Turn off hot water heater when not in use (i.e. on weekends in some facilities) or when hot water use is not needed for two days or more.
- Turn off cooking hoods when not in use.
- Implement a set start-up and shut-down schedule for the broiler, fryer and range which reduces both pre-heating and idle times.
- Do not run faucets while washing dishes, filling water glasses, etc.
- Lower the water heating thermostat a few degrees or to the lowest effective temperature.
- Maintain hot water equipment and fixtures and plug leaks as they occur.
- Insulate hot water pipes and tank.
- Flush out storage-type water heater tanks annually to prevent sediment build-up.
- Every time a dishwasher, washing machine or oven is used, make sure it is full.
- Recycle kitchen grease.

reCs

RECOMMENDATIONS

- Install low-flow spray valves.
- Recycle cooking oils for biodiesel fuel reuse.
- Buy local foods and produce.
- Donate leftover food to your local food bank.



At Cabin John Village necessary development elements sets the stage for long-term sustainability.

RESOURCES

ONLINE INFORMATION FOR SUSTAINABLE PRACTICES

Website	Link	Why it's a good resource	General	Electric/Energy: Lighting & HVAC	Water	Waste	Retail Operations	Restaurant Operations	Building Interiors
CalRecycle Waste Reduction Tip	calrecycle.ca.gov	California has the strongest legislation for waste reduction and this ca.gov site is the most comprehensive resource for recycling tips.				●			
CarbonFund.org	carbonfund.org	A carbon offset provider and non-profit organization providing information on how to reduce and offset climate impact through clean energy solutions		●	●				
Conserve by National Restaurant Association	conserve.restaurant.org	Conserve Solutions for Sustainability, an Environmental Initiative of the National Restaurant Association						●	
Database of State Incentives for Renewables & Efficiency	dsireusa.org	Comprehensive source of information on state, local, utility and federal incentives and policies that promote renewable energy and energy efficiency		●	●				
Electronic Product Environmental Assessment Tool	epeat.net	EPEAT is a system that helps purchasers of computer equipment evaluate, compare and select electronic products based on their environmental attributes.				●	●		
Energy Star	energystar.gov	Energy Star provides tips and resources for improving energy efficiency in buildings of all types.		●	●				
Environmental Leader	environmentalleader.com	Energy & Environmental News for Business	●						
Food Service Technology Center	fishnick.com	The FSTC is the industry leader in commercial kitchen energy efficiency and appliance performance testing.		●	●	●		●	
Greening Retail	greeningretail.ca	The goal of the Greening Retail program is to help retailers reduce their environmental impact and at the same time, save money and improve the bottom line.	●				●		
Green Seal	greenseal.org	Green Seal develops life-cycle-based, multi-attribute standards and certifies products and services that can prove they meet our strict criteria for human health, reduced environmental impact and excellent performance.				●	●	●	
U.S. Environmental Protection Agency (Dedicated Retail Portal)	epa.gov/retailindustry	Dedicated Retail Industry Portal by U.S. Environmental Protection Agency	●				●		
U.S. Green Building Council (USGBC)	usgbc.org	The USGBC is the non-profit organization behind LEED (Leadership for Energy and Environmental Design), a Green Building Rating System for design, construction and operation of high performance green buildings.							●
WaterSense	epa.gov/watersense	WaterSense is an EPA-sponsored partnership program that seeks to protect the future of our nation's water supply by promoting water efficiency and enhancing the market for			●				



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