

Office Supplies

What are the key green issues?

» Resource Use and Greenhouse Gas Emissions and Toxins:

- **Binders:** Office binders are often covered with polyvinyl chloride (PVC or vinyl) plastic. PVC is the most toxic plastic for both human health and the environment. No other plastic contains or releases as many dangerous chemicals, including dioxins, phthalates, vinyl chloride, ethylene dichloride, lead, and cadmium, which are linked to diseases such as cancer, asthma, birth defects, reproductive harm, learning disabilities and developmental disabilities.
- **Ink and Toner Cartridges:** Toner cartridges placed in photocopiers, fax machines and multifunction devices have significant environmental implications with respect to resource and energy consumption during their production. The process of manufacturing cartridges is considered energy consumptive with up to 3 liters of oil used to manufacture the cartridges plastic casing alone.
- **Pens and Pencils:** Writing instruments can contain hazardous wastes including toxins found in plastics, metals and inks, which have environmental and human health costs. Petroleum-based solvents used in many types of ink are VOCs, which off-gas when drying causing problems for indoor air quality.

» Waste:

- **Ink and Toner Cartridges:** Used cartridges contribute to landfill waste. 350 million cartridges are disposed of annually in North America while some of the toner in these cartridges goes unused. Plastic cartridge casings can take up to 450 years to decompose in landfills. The toner inside cartridges is toxic and can damage the environment by contaminating groundwater and soil.

Office supplies are supplies regularly used in offices by organizations. They include small, daily use items such as paper clips, post-it notes, staples, staplers, binders, writing utensils such as pens and pencils as well as ink and toner cartridges for printers, fax machines, photocopiers and multifunctional devices. For the purpose of this factsheet, we are focusing on binders, ink and toner cartridges and pens and pencils.



How do greener office supplies advance Government's strategic priorities?

✓ Reducing Energy, Resource Use and Toxins

Binders and File Folders: Recycled cardstock binders with either no cover or a low VOC recycled plastic cover reduce resource use and health affecting emissions. Replaceable covers will increase the lifespan of the metal binding should the raw cardstock ever wear out.

Pens and Pencils: There are a variety of green options on the market made from everything ranging from wood to recycled post consumer plastic. Pens and pencils recently have even been made from recycled denim and money and even use non-toxic ink, which improves indoor air quality and human health. These pens reduce the consumption of petroleum products used to create energy for the extraction of the materials that are used to make instruments. They also reduce the depletion of other natural resources used to construct instruments such as rubber, metals, trees and petroleum.

✓ Reducing Unnecessary Waste


Generally, the best way to reduce waste is to buy supplies only when they are needed.

Pens and Pencils: Purchasing recycled, biodegradable, refillable or reusable products will reduce accumulation of used instruments in landfills.

Toner Cartridges: Recycling end-of-life cartridges and producer take back programs keep cartridges out of the landfill and also enable remanufacturing of used cartridges, reducing the material and energy used for new ones.

Myth Buster

Remanufactured toner and ink cartridges perform just as well as those that are new. Contrary to refilled cartridges they have been completely disassembled with all components inspected, separated and cleaned, installed with a new drum, new wiper blade and new magnetic roller, filled with new toner to original specifications, and sealed with a pull-out strip to prevent leakage.

Recommended	Why is it important?	How do I know I am getting it?
BINDER AND FILE FOLDERS		
<p>✔ Look for binders that are made from recycled corrugated cardboard, paperboard and recycled plastic with at least 25 percent post consumer recycled content and are PVC free</p>	<p>Post-consumer recycled content increases resource efficiency and decreases waste. Being PVC free reduces health risks.</p>	<p> Binders are certified by ECOLOGO™. Verify with vendor the percentage of post consumer recycled content.</p>
PENS AND PENCILS		
<p>✔ Look for recycled pens and pencils (and ideally refillable) with at least 50 percent post consumer recycled content</p>	<p>Using pens and pencils from recycled materials (plastic, waste wood, waste newspaper, and cardboard) diverts those materials from landfill.</p>	<p>Pens and pencils are certified by ECOLOGO™. Verify with the vendor the percentage of post consumer recycled content.</p>
<p>✔ Look for refillable pens, pencils and markers</p>	<p>In refillable pens, pencils and markers, the pencil lead and/or the ink are the only consumable parts, while the barrels (usually made of plastic) are durable. Using these will contribute to waste reduction.</p>	<p>Pens are certified by ECOLOGO™.</p>
<p>✔ Biobased materials</p>	<p>Biobased materials are often biodegradable, e.g. pens made from cornstarch disintegrate within one year of being in a landfill.</p>	<p>Verify with your supplier whether he can offer writing instruments from biobased materials and whether they are biodegradable.</p>

Recommended	Why is it important?	How do I know I am getting it?
TONER/INK CARTRIDGES		
<p>✓ Buy toner cartridges that have been fully remanufactured or are ECOLOGO™ certified</p>	<p>Buying remanufactured cartridges reduces material, energy use and landfill waste. It ensures that remanufacturers will disassemble, clean, repair, remove worn parts, refill and, if necessary, dispose of cartridges to an acceptable standard.</p>	<p>Specify that cartridges are remanufactured to specifications equal to or exceeding original equipment manufacturer's (OEM) cartridge standards of quality and performance, as well as approved remanufactured toner cartridge industry standards.</p>
<p>✓ Manufacturer has a take back program for end-of-life toner cartridges</p>	<p>A supplier/manufacturer take back program reduces waste and cost for government.</p>	<p>Many manufacturers allow consumers to send cartridges back free of charge.</p>
<p>✓ Packaging:</p> <ul style="list-style-type: none"> • Must permit users to repackage spent cartridges for return to the manufacturer • Corrugated packaging must contain post consumer recycled content • Packaging must not contain polyvinyl chloride plastics (PVCs) 	<p>Recycled content in packaging increases resource efficiency and reduces waste to landfill.</p>	<p>Verify with the supplier that spent cartridges can be returned to the manufacturer, that packaging contains post consumer recycled content and that it doesn't contain PVCs.</p>

What else could I look for?

In addition to the minimum recommended criteria outlined above, there are stronger green attributes you can look for when making your purchasing decision.

Recommended	Why is it important?	How do I know I am getting it?
Reuse Old Binders	Eliminating the need to purchase something new is the best way to reduce environmental impacts as well as costs.	Encourage staff to reuse and relabel old office binders.
Reuse Old Pens	Reusing pens reduces waste and costs.	Encourage staff to reuse old pens that are still functioning or are refillable.
Soy and Vegetable Based Inks	In soy inks, a portion of the petroleum oil has been replaced by soybean or other vegetable oil. Most soy inks still have some petroleum in them. However, soy inks reduce the amount of volatile organic compounds (VOCs) that are released by petroleum oil inks—sometimes by as much as 40 percent.	Ask your supplier for soy and vegetable based ink options, whether they contain petroleum and how much.

Resources

- Resort Municipality of Whistler, [Sustainable Purchasing Product Assessments, Writing Instruments](#)
- Canmore Sustainable Purchasing Guidelines, [Writing Instruments](#)