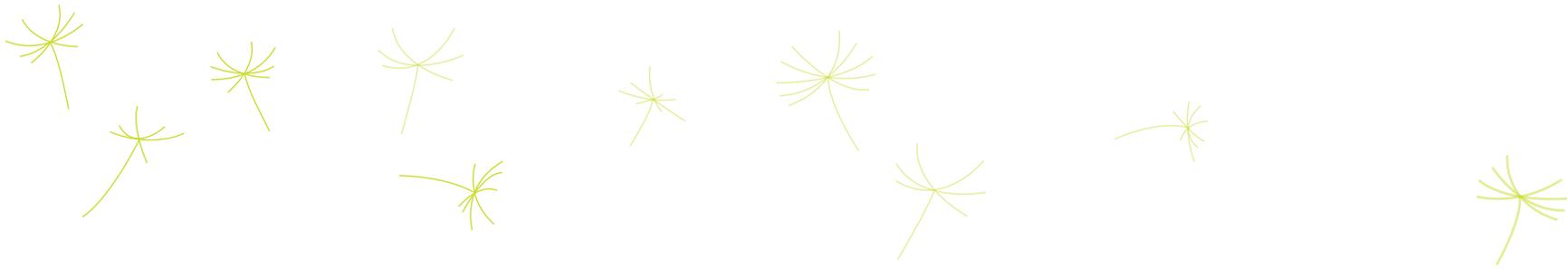


green operations



introduction

We are part of WRT because we are committed to the environment and as such, we believe that we can improve the relationship between human habitat and environmental conservation. Our projects reinforce this belief and our Strategic Plan sets forth the actions needed to advance, refine and reinforce our practice.

Yet, our commitment to sustainable principles does not end with a project's design. Our conviction must extend to how our business operates: making better choices and changes in our selection of printing, office products, transportation, office design, and daily work habits.

The Green Operations Framework is a guide that gives direction on how we can improve each office's and each employee's sustainable commitment. The document sets out goals, both personal and office-wide, and establishes targets for improvements. It also identifies a process which enables grass roots staff empowerment that will be essential to its successful implementation.

Most importantly, it ensures we practice what we preach.

Joe Healy
Managing Principal

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Office Products

Goal: Minimize our office waste streams and provide green purchasing guidelines.

TARGET AREAS

1.1 Reduce / Reuse / Recycle

- Reduction should always be our foremost priority. For all purchases, consider ease of reuse, specify highest percentage of recycled content and select products that minimize packaging.
- Explore alternative waste streams for reusable resources such as: magazines, samples, kitchen waste for composting, electronic equipment, etc. to divert these resources away from landfills.

ASSESSMENT

- ___ Review all current programs for diverting resources away from landfills and research if there any additional opportunities.
- ___ Determine feasibility of composting or wormbin.
- ___ Identify local organizations to be recipients of WRT reuseable resources.

INITIATIVES

- ___ **Raise awareness of recycling options and outlets.**
- ___ Post signage to inform employees and visitors.
- ___ Provide strategically placed and adequate collection bins.
- ___ Publish list of local organizations that accept donations or materials
- ___ Include recycling policies and procedures in new employee orientation.
- ___ Provide recycle bins at desks and eliminate use of trash bags at desk locations to direct all other office waste to centralized waste collection points.

Develop list of Reduce/Re-use/Recycle Best Management Practices (BMPs) for individuals to use as a guide. Examples:

- ___ Return samples to representatives
- ___ Donate magazines and samples to local schools
- ___ Compost kitchen waste.
- ___ Create note-pads from single-sided paper.
- ___ Recycle paper only after it has been printed on both sides.
- ___

1.2 Printing / Paper

- Reduce paper consumption by printing less.
- Use environmentally friendly products for marketing materials.
- Use refillable or recyclable ink & toner cartridges.

- ___ Quantify levels of paper consumption per person.
- ___ Identify refill/recycling opportunities for ink & toner cartridges and nontoxic inks and source for nontoxic inks.
- ___ Review paper and printing strategies with office manager/administrator.

- ___ **Establish policy to reduce paper consumption by tracking quantity of paper purchased.**
- ___ **Encourage employees to view documents on screen to reduce amount of printed paper. Include a logo on documents and email to remind individuals to "think before you print".**
- ___ **Include information on marketing documents about paper, ink, and recycled content of material.**
- ___ **Develop list of preferred products/practices such as:**
 - ___ Non-toxic inks.
 - ___ 100% post-consumer recycled paper for general office paper and a minimum of 30% post-consumer content for large format printing. Purchase paper that is FSC (Forest Stewardship Council) certified and uses PCF (Process Chlorine Free) bleaching.
 - ___ Where feasible, make double-sided printing the default for printers and copiers. Designate a printer/drawer to re-use single-sided printed paper.
 - ___ Re-fill or recycle cartridges wherever possible. Purchase cartridges that have been re-manufactured.

1.3 Office Supplies

- Purchase office supplies that can be reused or recycled, have a high recycled content, that are non-toxic, etc. such as envelopes, cardboard, file folders, labels, markers, binders and notebooks.

- ___ Review all product procurement strategies with office manager(s)/administrator(s).
- ___ Inventory types & quantities of office supply products.

- ___ **Purchase from companies which use minimal packing materials, that be recycled, with preferences for local companies and suppliers.**
- ___ **Develop list of preferred products. Example:**
 - ___ Purchase windowless envelopes made of 100% post consumer recycled content.

Goal: Minimize our office waste streams and provide green purchasing guidelines.

1.4 Kitchen & Bathroom Supplies

TARGET AREAS

- Reduce the waste streams from the kitchens and bathrooms.
- For edible products, support sustainable agricultural, Certified Fair Trade and local organic, whenever possible.
- Use biodegradable unscented products whenever possible.

ASSESSMENT

___ Inventory products and quantities used in the kitchens and bathrooms and research greener alternatives such as Green Seal Certified.

INITIATIVES

- ___ **Use durable dishware, as first option. If disposable dishware is needed, use products that are biodegradable, recyclable, and have a high-recycled content.**
- ___ **Paper Products (napkins, coffee filters, paper towels, cups, plates etc.) should strive to be 100% post-consumer (PCF), unbleached and biodegradable.**
- ___ **Purchase soaps & cleaners that are biodegradable, non-petroleum based, do not contain antimicrobial agents and are Green Seal Standard certified.**
- ___ Purchase disposable cutlery and stir straws that are either biodegradable (corn, soy, sugarcane, or starch-based) or recyclable.
- ___ Purchase coffee & tea that is shade-grown, organic and Fair-Trade Certified; compost grounds, filters and bags.
- ___ Purchase unrefined organic sugar in bulk and use dispensers in lieu of individual packets.
- ___ Purchase local, organic, hormone-free milk from pasture raised cows.

1.5 Janitorial Supplies

- Encourage use of Green Seal Certified products to maintain indoor air quality health.

___ Inventory cleaning products used by janitorial staff.

- ___ **Identify areas that may not need to be cleaned as frequently due to limited use.**
- ___ **Present alternatives to building management for improvements in cleaning practices and products.**
- ___ **Develop list of preferred products such as:**
 - ___ Purchase trash bags, biodegradable or post-consumer recycled material.
 - ___ Purchase Green Seal Standard Certified products. Reduce packaging.

1.6 Furniture

- Select durable, high quality, ergonomically correct furniture with high level of flexibility to minimize need for replacement and contribute to ease of maintenance.
- Furniture should be low-emitting to protect indoor air quality health.

___ Review current procurement strategies for office furniture.

___ Inventory and assess condition of existing furniture. List items requiring replacement.

- ___ **Produce specifications for furniture and furniture finishes that enable compliance with LEED criteria, such as recycled content, low-VOC's, renewable resources, resource efficient manufacturing. For example:**
 - ___ Mill work must not contain added urea formaldehyde. All wood to be FSC certified.
 - ___ Identify preferred regional manufacturers that use renewable resources, incorporate recycled content in product lines and minimize waste in their manufacture and packaging materials.
- ___ Explore options to acquire used furniture in lieu of new whenever possible without compromising ergonomic or aesthetic standards.
- ___ Publish list of nonprofits or charitable organizations that accept used furniture donations.

2

New Construction and Renovation

Goal: Reduce negative impact of physical plant on the environment and improve health of the workplace.

	2.1 General	2.2 Finishes	Notes
TARGET AREAS	<ul style="list-style-type: none">Utilize sustainable strategies in physical plant as much as possible, such as minimizing construction and demo waste, using recycled and low-VOC materials, conserving energy, maximizing natural daylighting, provide showers for bicycle commuters, etc.	<ul style="list-style-type: none">Utilize LEED criteria in choosing new finishes and built-ins, such as paint, composite wood, agrifiber products, carpet, adhesives and sealants.	
ASSESSMENT	<p>___ Use LEED checklist as a baseline for where the office rates today.</p>	<p>___ Inventory and assess condition of existing finishes and built-ins.</p> <p>___ Identify maintenance/repair schedule, ie: carpet cleaning, painting, etc.</p>	
INITIATIVES	<p>___ Locate WRT offices in downtown locations served by public transit, and where possible in green or existing buildings.</p> <p>___ Configure office layout to promote collaboration.</p> <p>___ All WRT office renovations or new construction must receive a minimum LEED Silver certification.</p>	<p>___ Purchase from manufacturers that use renewable resources and incorporate recycled content in product lines, where appropriate.</p> <p>___ Use LEED criteria to produce specifications for new or replacement finishes and built-ins, such as paint, carpet, wood and wood composite products, adhesives and sealants. Example: Carpet replacement specification should include a requirement for recycled content, carpet tiles, where appropriate, and reclamation at end of life.</p>	

Prerequisite items are in **bold**.

TARGET AREAS

3.1 Housekeeping

- Eliminate potential pollutants and allergens as much as possible through the use of biodegradable and unscented house cleaning materials.

ASSESSMENT

- ___ List cleaning products now being used.
- ___ Identify those which are problematic and can be improved in following categories:
 - ___ purchased by WRT
 - ___ supplied by building management
 - ___ supplied by outside services

INITIATIVES

- ___ **Provide list to central housekeeping of suggested healthier alternatives to cleaning products or methodologies (Green Seal Standard GS-37 products or EPA's "Environmentally Preferable Purchasing").**

3.2 Renovations/Maintenance

- Maintain materials and finishes to avoid replacement.

- ___ Identify protocol for specifying and purchasing built-ins, finishes, and maintenance schedule for air filters, etc.

- ___ **Use LEED IEQ materials credit criteria as specifications for new or replacement finishes and built-ins, such as paint, carpet, wood and wood composite products, adhesives and sealants.**

3.3 IAQ Test

- Measure and manage indoor air quality.

- ___ Measure current indoor air quality by means of an Industrial Hygienist. Test to determine concentrations of CO₂, formaldehyde, particulates (PM 10), TVOC and 4-PCH.

- ___ Indoor air quality test
 - ___ Report findings to building management.
 - ___ Create "Plant Team" task force to purchase appropriate air-cleaning plants toxins.
 - ___ Schedule annual follow-up IAQ test to measure improvement in air quality.
- ___ Adopt policy of "fragrance-free" office.
- ___ Use air-cleaning plants to address persistent toxins affecting air quality.

4

Water

Goal: Reduce office water consumption.

TARGET AREAS

4.1 Total Water Consumption

- Raise awareness of efficient water use, outgoing and incoming water quality, and measure and manage impacts in all of these areas.

ASSESSMENT

- ___ Assess incoming water quality
- ___ Assess cleaning products (including hand soap) relative to water quality impacts
- ___ Inventory existing fixtures and faucets to determine inefficiencies.

INITIATIVES

- ___ **Address incoming and outgoing water quality issues as determined to be needed by using different hygiene, cleaning/maintenance and filtration products.**
- ___ **New and replacement faucets, fixtures and appliances shall be water efficient. All fixtures shall have aerators.**
- ___ **Organize one water-related volunteer outreach annually. (See Section 7 – Community.)**
- ___ Target 25% reduction of office water consumption by 2018.

4.2 Kitchen Fixtures & Appliances

- Foster efficient water utilization in kitchen areas.

- ___ Estimate kitchen water consumption.

- ___ **Develop list of Water BMPs for individuals to use as a guide. Examples:**
 - ___ Report/fix leaks immediately to reduce water waste.
 - ___ Promote dishwasher use in lieu of hand washing to reduce water consumption.
 - ___ When washing dishes refrain from letting the water run continuously.
 - ___ Replace/maintain water filters per manufacturer's recommendations to avoid contamination of clean water.
- ___ **Maintain faucets, fixtures, and appliances to ensure most efficient water usage. Schedule annual maintenance to verify.**

4.3 Bathroom Fixtures

- Foster efficient water utilization in bathroom facilities.

- ___ Estimate bathroom water consumption.

- ___ **Develop list of Water BMPs for individuals to use as a guide. Examples:**
 - ___ Report/fix leaks immediately to reduce water waste.
 - ___ When brushing teeth refrain from letting the water run continuously.
- ___ **Maintain faucets, fixtures, and appliances to ensure most efficient water usage. Schedule annual maintenance to verify. Calibrate auto-flush sensors to accurately activate.**
- ___ **For new or replacement fixtures, specify water-conserving plumbing fixtures, such as dual-flush toilets. Consider dry fixtures such as waterless urinals and composting toilets, as allowed by code. Consider water recovery systems to operate with graywater or stormwater volumes.**

Goal: Reduce energy consumption and take steps to offset the green house gas emissions associated with energy production.

5.1 Total Energy Consumption

TARGET AREAS

- Instill energy conscious practices in all employees and encourage employees to adhere to energy savings BMPs.
- Energy Supplier – To reduce the negative environmental impacts, subscribing to a clean energy generation provider is preferred. When green power is not available, enrollment in an energy generation credit program should be explored.
- HVAC – Reduce the negative environmental impact related to the HVAC systems.

ASSESSMENT

- ___ Assess total energy use using metered or estimated usage per square footage.
- ___ If daylighting techniques are implemented, quantify the amount of energy saved by employing daylighting compared to conventional lighting.
- ___ Survey local energy providers to determine if there are green energy programs in which to participate. Research energy generation credit programs.
- ___ Assess HVAC operations.

INITIATIVES

- ___ **Reduce energy consumption per employee by 25% by 2018.**
- ___ **Adjust HVAC operations to conserve energy.**
- ___ Subscribe to energy provider that provides green energy alternatives. When green energy provider is not available, purchase renewable energy equivalent to a minimum of 20% of our total office energy consumption, initially increasing the percentage annually up to 100% in by 2018.

5.2 Lighting & Plug-loads

- Address inefficient and/or unnecessary lighting practices and systems.

- ___ Calculate energy savings when switching to new energy-efficient lamps (bulbs).
- ___ Research recycling options for fluorescent bulbs.
- ___ Assess occupant behaviors and opportunities for lighting use efficiency improvements.

- ___ Replace and properly recycle energy inefficient, bulbs (e.g. replace halogens and incandescents with fluorescents and LEDs where possible.)
- ___ **Optimize natural lighting techniques. Implement daylighting strategies in new construction. (See Section 2 – New Construction & Renovations.)**
- ___ **Develop list of Energy BMPs for individuals to use as a guide. Example:**
 - ___ Turn off common room lights when not in use.
- ___ Install motion, light level sensors and timers to adjust to natural lighting levels and time of day. Schedule annual maintenance to ensure sensors are properly functioning.
- ___ Add signage to light switches recommending optimal lighting schemes and reminding occupants to turn off lights where-ever motion sensors are not installed.

5.3 Office Equipment

- Promote purchasing practices that favor equipment that meets Energy Star criteria and encourage employees to adhere to Energy BMPs.

- ___ Inventory electronics throughout office. List how much energy each piece of equipment consumes. Analyze the benefit of shutting down non-essential equipment overnight. Identify equipment to be replaced/upgraded.

- ___ **Develop list of Energy BMPs for individuals to use as a guide.**
 - ___ Turn off equipment when not in use.
 - ___ Institute/Enforce “Stand-by” policy in the day and “Shut-Down” policy in the evening for all equipment at individual desks.
- ___ **Phase out non-Energy Star compliant equipment by 2013. All new and replacement equipment shall meet the Energy Star standards (where available).**

6 Transportation

Goal: Decrease green house gas emission associated with employee commuting and business travel.

	6.1 Employee Commuting	6.2 Business Travel	6.3 Carbon Neutral Offsetting
TARGET AREAS	<ul style="list-style-type: none"> Encourage use of alternative modes of transportation for commuting: carpooling, mass transit, bicycle, walk, etc. 	<ul style="list-style-type: none"> Encourage use of alternative strategies for business travel: webcast, video, and tele-conference, in lieu of travel. Patronize car rental companies that provide hybrid vehicles options in their fleet. (See Section 8-Service Providers.) 	<ul style="list-style-type: none"> Offset commuting and business travel with the purchase of carbon credit or tree planting.
ASSESSMENT	<ul style="list-style-type: none"> Assess commuting habits used by employees. Calculate CO2 generation due to commuting. 	<ul style="list-style-type: none"> Assess business traveling habits used by employees. Calculate CO2 generation due to business travel. Assess benefits of utilizing video conference. 	<ul style="list-style-type: none"> Document amount of carbon offsetting WRT is currently invested in. Research programs for WRT to enroll.
INITIATIVES	<ul style="list-style-type: none"> Locate office 1/2 mile from commuter rail or 1/4 mile from at least 2 bus lines per LEED requirements. (See Section 6 New Construction and Renovation.) Provide bicycle facilities for 5% of building occupants per LEED requirements. (See Section 6 New Construction and Renovation.) Develop incentive based programs/contests to encourage sustainable transportation habits. Target goal of 25% reduction in greenhouse gas emissions caused by commuting travel by 2018. 	<ul style="list-style-type: none"> Develop list of Transportation Best Management Practices (BMPs) for individuals to use as a guide. Examples: <ul style="list-style-type: none"> Rent hybrid vehicle, when available. (See Section 8 – Service Providers.) Enroll in vehicle sharing program for non-driving employees to attend meetings, etc. Stay in hotels that employ eco-friendly business practices. Invest and employ video conference practices in lieu of business travel, whenever possible. Target goal of 25% reduction in greenhouse gas emissions caused by business travel by 2018. 	<ul style="list-style-type: none"> Phase in carbon neutral offset program starting at 50% and annually increase percentage up to 100% over 10 years.

Goal: Actively participate in fostering sustainable lifestyles, both within the WRT community as well as the greater communities in which we practice design.

7.1 Green Teams

TARGET AREAS

- Form Green Team Task Force that would be responsible for monitoring, enforcing, and updating green operations framework and plans.

ASSESSMENT

___ Survey employees of each office to determine individual interest to spearheading Green Team Task Force efforts.

INITIATIVES

- ___ **Appoint/Elect Green Team Task Force. Responsibilities include:**
 - ___ Assessment, Evaluation & Coordination.
 - ___ Welcome New Employees.
 - ___ Develop/Launch/Maintain initiative/programs
 - ___ Report to Green Council.
 - ___ Recruitment of Volunteers and Green Team Task Force for each office.
- ___ Green Team Task Force to post and coordinate volunteer opportunities. Publish activities on the intranet.

7.2 Community Outreach

- Community outreach provides a means to give back to the community while simultaneously providing fun team building and networking opportunities.

___ Survey employees to determine:

- ___ Volunteer activities that have current participation.
- ___ Measure interest level in volunteering both generally and specifically (ie. habitat restoration, tree planting, youth mentoring, etc.
- ___ Determine if anyone would like to spearhead particular volunteer efforts.

- ___ **Celebrate volunteerism with awards at holiday party.**
- ___ Host a happy hour and invite local sustainable organizations to network. Using Philadelphia as an example, organizations such as Philly Car Share, Farm to City, CHAD mentorship program, etc. could be invited.
- ___ Assign volunteer coordination responsibilities.
- ___ Record volunteer activities and post to the WRT intranet.

7.3 Publicity & Awareness

- Celebrate WRT efforts and contributions made towards a sustainable future, both in-house and to the larger community via:
 - ___ Intranet updates for WRT employees.
 - ___ Website provides perspective client and employees can get a glimpse of our collective convictions.
 - ___ Professional Publications.
- Thoughtfully implemented WRT branding can encourage/strengthen WRT's recognition.
- Creating opportunities to build an awareness of sustainable issues.

___ Measure the current publicity efforts to see if there are any missed opportunities.

- ___ **Create welcome packet for new employees that includes green operation framework/plan, volunteer opportunities, etc.**
- ___ Develop green calendar of both local and national events, conferences, etc. that focus specifically on sustainability.
- ___ Employ dynamic publicity methods to strengthen community and a sense of pride in an organization/cause.
- ___ Produce office tour / guide highlighting all green strategies and make easily available to WRT community and visitors.

7 Community

Goal: Actively participate in fostering sustainable lifestyles, both within the WRT community as well as the greater communities in which we practice design.

	7.4 Live/Work Balance	7.5 Charitable Giving Program	Notes
TARGET AREAS	<ul style="list-style-type: none"> As part of WRT's effort to green the firm, a concerted effort to invest in the human resource is a key component. WRT's primary goal is to provide a positive work environment while maintaining a healthy and sustainable live/work balance. 	<ul style="list-style-type: none"> Over the years WRT and its employees have been extremely philanthropic in numerous ways. Institutionalizing the means of charitable giving provide an opportunity to raise awareness of the causes that we support. Dedicating a percentage of of profits to support those causes can help contribute to the greater community in which we practice design. 	
ASSESSMENT	<p>— Survey employees to determine what current/ additional benefits are/would be highly valued in assisting strike a healthy live/work balance.</p>	<p>— Benchmark WRT's current charitable givings as an organization</p>	
INITIATIVES			

Goal: Patronize local service providers and vendors that prescribe to sustainable business ethics.

8.1 Catering/Florist

TARGET AREAS

- Use catering services and purchase food for meetings, events, etc. to provide healthful and sustainable food options.
- Patronize florists that practice sustainable plant maintenance.

ASSESSMENT

- ___ Identify local catering services to determine if they:
 - ___ Support local, seasonal, organic agriculture and sustainable farming practices.
 - ___ Provide durable /recyclable/bio-degradable serving vessels, dishware, utensils and napkins.
- ___ Identify local florists to determine which companies provide plants and plant tending that focuses in native, pesticide-free plants and maintains potted plants with organic plant food.

INITIATIVES

- ___ Develop a list of preferred vendors for each category that adhere to sustainable business ethics and WRT preferred criteria.
- ___ Share list of service providers with subconsultants, lunch-time lecturers, etc. to help them make more sustainable choices that fall in line with WRT's ideals.
- ___ Direct a minimum of 50% of opportunities to the preferred companies and increase the percentage annually to achieve 100% by 2018.

8.2 Off-Site Printing

- Support commercial printers that offer green options.

- ___ Identify local printers to determine which companies provide recycled paper options and non-petroleum based/bio-degradable inks.

- ___ Develop a list of preferred vendors for each category that adhere to sustainable business ethics and WRT preferred criteria.
- ___ Share list of service providers with subconsultants, lunch-time lecturers, etc. to help them make more sustainable choices that fall in line with WRT's ideals.
- ___ Direct a minimum of 50% of opportunities to the preferred companies and increase the percentage annually to achieve 100% by 2018.

8.3 Car Rentals

- When a rental car is needed, use companies that have hybrid and high fuel efficient vehicle options. Hybrid vehicle use is preferred.

- ___ Identify car rental companies to determine which companies provide hybrid and fuel efficient car options.

- ___ Develop a list of preferred vendors for each category that adhere to sustainable business ethics and WRT preferred criteria.
- ___ Share list of service providers with subconsultants, lunch-time lecturers, etc. to help them make more sustainable choices that fall in line with WRT's ideals.
- ___ Direct a minimum of 50% of opportunities to the preferred companies and increase the percentage annually to achieve 100% by 2018.
- ___ Negotiate corporate rental agreement with a national car rental company that can guarantee hybrid or most fuel efficient options for WRT employees.

8

Service Providers

Goal: Patronize local service providers and vendors that prescribe to sustainable business ethics.

8.4 Housekeeping

TARGET AREAS

- Contract with carpet cleaners or other janitorial services that use environmentally friendly cleaning products and practices. (See Section 3-Indoor Air Quality.)

ASSESSMENT

- Interview housekeeping companies to determine if environmentally friendly products and cleaning methods are being employed. Avoid use of anti-bacterial products.
- Identify carpet cleaners that use environmentally friendly products.

INITIATIVES

- Develop a list of preferred vendors for each category that adhere to sustainable business ethics and WRT preferred criteria.
- Share list of service providers with subconsultants, lunch-time lecturers, etc. to help them make more sustainable choices that fall in line with WRT's ideals.
- Direct a minimum of 50% of opportunities to the preferred companies and increase the percentage annually to achieve 100% by 2018.
- Provide preferred cleaning products for building-provided housekeeping if standard products are not acceptable. (See Section 1.5 – Janitorial Supplies for preferred product specifications.)

Notes

Notes

