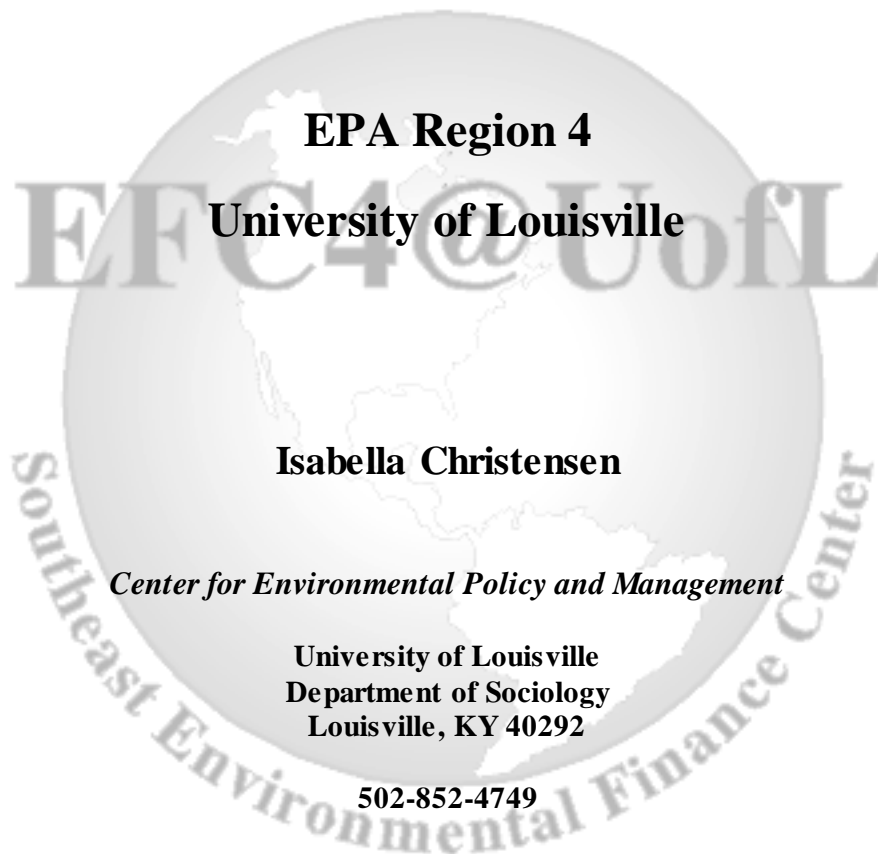


*Green Conferences*

**Practice Guide #19**

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**Southeast Regional Environmental Finance Center**



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## **Introduction**

A conference that results in a minimal amount of negative environmental impact can be called a *green* event. This broad definition is likely become more focused in coming years, as conferences and other events are increasingly targeted for inexpensive yet effective environmental face-lifts. Green meetings occupy a rapidly growing business niche, spurred on by an expanding number of companies offering environmentally conscious meeting services and products, the adoption of the language of sustainability by city officials in order to attract conferences and conventions, and the trend toward environmentally conscious convention center design and construction. This is an opportune moment for surveying the greening options available to the meeting planner or host, and for considering how financial considerations and organizational goals intersect with environmental ideals.

This guide will touch on these broad issues as it explores the possible applications of green meeting philosophy and practice to academic conferences. The narrow focus on academic conferences is not only useful to people directly involved in their planning and execution, but also provides a jumping-off point for anyone wishing to understand an organization's motivation to go green. Ultimately, this guide is intended to assist conference organizers and hosts alike in reducing environmental impact while improving the social and economic aspects of their events.

## **Considering Organizational Motivations**

Researchers gather on a regular basis in order to share and advance the work being done within their academic fields. These meetings are organized, usually on an annual basis, by the professional associations to which researchers belong. On a national level, academic conferences draw hundreds or even thousands of attendees and are typically held in cities that offer sufficient and appropriate accommodations, entertainment and facilities. On a regional or local level, association chapters often rely on their members' institutional affiliations to host proceedings, and require attendees to independently secure local lodging and some percentage of meals and entertainment. Thus, national meetings are less dependent on academic institutions (and therefore are more diversely integrated with the economies of host cities) and wield more financial and political influence than their chapter counterparts. This guide will focus on national-level conferences while chapter meetings will be addressed in a future guide concerning green campuses.

What might motivate an academic association to adopt green meeting practices? How can association leadership know whether members will accept changes? In answering these questions, which might be asked of any group, it is helpful to investigate an organization's institutional character and stated purpose.

- Academic associations' mission statements or codes of conduct unite members under a common vision and signal group identity to outsiders. They often contain

a statement on the broad social purposes and responsibilities of the organization. For example, the Code of Ethics of the American Sociological Association articulates General Principles (Professional Competence, Integrity, Professional and Scientific Responsibility, Respect for People's Rights, Dignity, and Diversity, Social Responsibility) that generally emphasize the sociologist's obligation to serve the public good in both research and conduct (American Sociological Association, 2007). Similar commitments to an ethical and professional public service orientation are held by associations for physicians, political scientists, and other academics.

- University populations are often described as particularly welcoming of innovative policies and practices. To be sure, in lock-step with international trends, the nation-wide drive to improve the sustainability of college campus management and design as well as to secure a place for environmental issues and research within core curriculums is gaining impressive momentum. Dr. Cynthia Belar, Executive Director for Education for the American Psychological Association (APA), notes that the environmental commitment in academia is mushrooming: "In the United States, resolutions for sustainability education have been endorsed by over 300 college presidents and other higher-education associations." These forward-looking university environments serve as the home bases as well as important sources of professional socialization for many members of academic associations.
- Across academic fields, there is an express desire to do research that is relevant and useful to society at large. As the public becomes more concerned with climate change phenomena, so too does the research community. Academics now acknowledge that the environment impacts all aspects of life, and is therefore relevant to the social and natural sciences, the arts and humanities, and any other academic field concerned with human welfare. Belar finds that, "Psychology has much to contribute to efforts to sustain a healthy environment—on which we all depend. Dedicated psychologists such as those in our Div. 34 (Population and Environmental) provide relevant research and strive toward its application." Similar positions have been adopted within many fields by academic leaders and associations.

Observations such as these are useful tools in promoting a greener conference. For example, a green event planner can emphasize his/her ability to support an organization in realizing its mission to advance research in the service of general human welfare. A green meeting policy that seeks the feedback of association members (through a post-conference survey, for example) can discover strong support for the implementation of sustainable conference practices. The inclusion of environmental-impact research in academic conferences can be expected to create pressure to "walk the talk" by eliminating practices that reduce societal welfare. In short, understanding an organization's motivations to green its meetings can benefit both the buyers and the sellers of green meeting services and products.

## **Understanding Best Practice Options**

A best practice is any of a number of activities, products, and techniques known to advance a given goal (Superfactory, 2007). One way to think about best practice options is to decide whether their implementation is primarily the responsibility of the event planner or the event host. The Green Meetings Task Force (2004) adopted this pragmatic approach, in conjunction with a second strategy that distinguishes between minimum and strongly recommended best practices. A third way acknowledges the costs of change by designating practices that carry mostly negligible opportunity costs as ‘low-hanging fruit.’ Tedd Saunders, executive vice president of environmental affairs for Saunders Hotel Group and president of EcoLogical Solutions Inc., describes such practices as “low- or no-cost measures with exceptional return on investment (ROI) and ease of implementation” (Gardner, 2006). A fourth approach is suggested by the adage “reduce, reuse, recycle” which advocates three distinct but related goals, arranged in declining order from optimal to minimal environmental benefit. Yet another increasingly popular tactic is to ‘offset’ negative environmental impacts through the purchase of carbon credits or by investing in green energy production.

Thinking in terms of these different approaches can clarify which practices or combinations of practices are best suited to a particular event or organization given the available resources, stated goals, and particular environmental impacts. This conceptual approach can also guide the development of the indicators needed to measure the outcomes of implemented practices.

Indicators are important tools for understanding the actual outcomes of implemented policies and for justifying the continuation or expansion of a successful program (Municipal Waste Reduction, 1999). For example, Saunders’ strategy clearly lends itself to financial analysis while the outcome of the offset approach can be assessed with the help of readily-available offset calculators and formulas such as are offered by the World Land Trust (World Land Trust, 2005). Similarly, the amounts of supplies ordered, waste committed to a composting project, and recycling generated in the course of a conference indicate the extent to which an organization has executed a policy to “reduce, reuse, and recycle.” The burden of collecting the data required to make the indicators useful can be eased by hiring an auditing company (see below), by utilizing the conversion estimates provided by the U.S. Environmental Protection Agency (EPA), or by accessing a “waste characterization database” (Municipal Waste Reduction, 1999).

## **Choosing an Implementation Strategy**

Deciding on an implementation strategy is extremely important for the success of the project. Organizational change can be difficult to achieve, even where the end goal enjoys broad support from membership and leadership alike. Each association should select an implementation strategy in light of its organizational structure and the strength of its leadership, the demographics of its membership, the resources available to assist the transition, and the extent to which the project will impact daily functioning or place a

burden on individual members. Taking these issues into account, an organization should include in its project planning an implementation strategy that specifies the roles of the leadership and anticipates the response of the membership.

***Case Study 1: A model of voluntary participation under a top-down implementation strategy***

Scott Doyle, of the Residential and Event Services of Cornell University, suggests that academic world can take “cues from the private sector of which has integrated aspects of sustainability into its business practices and seen significant social, environmental and economic benefit.” He notes the successful conservation measures implemented by Interface Carpet Company CEO Ray Anderson who *requested* that the 1,000 attendees “mindfully reduce their environmental impact” during the course of a company conference. Doyle reports that relative to a comparably-sized conference group, the Interface employees “saved 48 percent water, 48 percent propane and 34 percent in solid waste charges due to their aggressive conservation measures.” Amortized over the year this would amount to over a \$1 million savings.” The context for Anderson’s request that employees prioritize conservation was a wholesale shift in the company’s environmental orientation that extended to product design and company energy practices. This story demonstrates that a holistic and top-down approach orchestrated and communicated by a committed upper-level leadership, might be at least as successful as a piecemeal or cautious strategy that expects resistance from the organization’s membership.

***Case Study 2: A mixed model of mandatory/top-down and voluntary/bottom-up implementation strategies***

Meeting Strategies Worldwide describes the effort to green the Unitarian Universalist Association (UUA) 2006 General Assembly by both offering non-compulsory sustainable options to attendees and contractually specifying its green preferences with service providers.

The compulsory measures taken by the UUA leadership were quite bold. For example, the organization introduced an “extensive and specific environmentally responsible meeting clause into the contract with the convention centre and caterer,” while publicly denouncing service providers and hotels that chose not to adopt the sustainable practices prioritized by the UUA. In addition to environmental savings realized by hotel programs, Meeting Strategies Worldwide (2006) counted among the end results of obligatory practice:

- recycling of 25 to 50 percent of convention center waste (including 250 pounds of cardboard, 900 pounds of paper, and 150 pounds of cans/plastic bottles);
- provision of bulk condiments, vegan and vegetarian meals, and fair-trade, shade-grown coffee;
- food concessions (representing a vast majority of all meal functions) served in compostable paper, rather than Styrofoam and plastic containers;



- exhibit impact reduction (76 percent of vendors used online exhibitor kits, and the majority of exhibit products and services were sourced locally).

The UAA was also successful in advancing its social causes while reducing its environmental impact. For example, it established a “permanent partnership between the America’s Center and Operation Food Search, the St. Louis regional food bank, to provide underserved food to the poor and hungry in the region” and donated left over materials to a local charity (Meeting Strategies Worldwide, 2006).

Conference participants were allowed to choose whether to take advantage of a number of sustainable practices; recycling containers were made available, and the registration process, which could be completed on-line registration or in the traditional paper-based manner, included an option to purchase a \$6 carbon offset. The extent to which attendees participated in the voluntary carbon offset program offered during the registration process was notable, though hardly sweeping: “20 percent of the 4,000 plus delegates participated in the offset, pooling \$5,078 for Carbonfund.org.” In other words, 800 people freely chose to pay a small amount (an average of \$6.35) as environmental impact compensation (Meeting Strategies Worldwide, 2006). The low percentage might reflect participants’ lack of familiarity with this option; the importance of user familiarity with innovation is suggested by the Meeting Strategies Worldwide (2006) report that the UAA membership has increase its use of the online registration option with time, for a total change of 36 percent (from 28 percent to 64 percent of registrants) over a three-year period (from 2003 to 2006). Indeed, this report goes on to note that:

... the Association has felt pushback from the community when online communication is offered without alternative hard copy materials. Some attendees have limited comfort or ability to use electronic communication and many are unwilling to part with the comfort of receiving their printed program in the mail before traveling to the meeting. Future opportunities to reduce paper use and printing and mail out cost will rely on delegates becoming more comfortable with online communication (Meeting Strategies Worldwide, 2006).

What is responsible for the slow acceptance rate of new practices among this membership? Perhaps UAA members are theoretically supportive of conference greening efforts, but are uncomfortable with the technology involved in paperless communication. If so, could this be resolved by providing basic technology training to conference attendees? Alternatively, it is quite possible that the UAA’s cautious mixed-policy approach (instituting an obligatory policy for event hosts and service providers but only an optional participation policy for conference goers) has encouraged attendees to cling to their comfort zones. Judging from the experience of other organizations, it seems unlikely that conference attendance levels would drop if the paper-based registration option eliminated completely.

This case provides additional support for the claim that top-down, holistic implementation is the more successful approach. In this view, an organization’s failure to clearly communicate or enforce its goals can delay individual adaptation to new practices

and undermine its own efforts to initiate institutional change. The executive approach is the preferred strategy of the U.S. and Canadian governmental environmental agencies; in fact, Environment Canada's Green Meeting Guide (2007) states that "the environmental program must be a priority at the highest levels of your organization. Senior managers should publicly commit to the greening process and make it clear to employees that the greening effort is an important part of their jobs."

Commitment to an environmentally sustainable conference policy does not, however, necessitate an overly-serious communication style or preclude the possibility of generating participant enthusiasm. For example, the National Recycling Coalition (2001) suggests that efforts to collect plastic name tag holders for future reuse might be bolstered by holding a prize drawing from the tag holder collection bins. There are plentiful chances to publicly reward the attendees' best efforts to adopt and support the organization's green goals. Regardless of the implementation approach adopted by the association, it is imperative to strive for participant acceptance and active involvement.

## **Measuring Impact**

It is difficult to overstate the importance of post-event accounting. Summarizing and quantifying the results of a new effort and continuing to monitor the outcomes of an existing program helps to justify efforts and expenditures to date, disaggregate results, and tailor future plans. When considering the outcomes of green conference planning, both the environmental and economic aspects should be subjected to evaluation. The relative importance assigned to these two broad categories and the timeframe for outcome evaluation are organization-specific issues; is the goal to balance economic and environmental impacts of the conference, or does the motivating mission statement suggest the prioritization of one aspect over the other? Although these matters have a considerable impact on data interpretation, the single covering statement that can be included here is that each association should specify its measurement parameters in the early stages of the planning phase, preferably during the development and articulation of greening goals.

### ***Environmental Savings***

No widely agreed-upon method for estimating of the environmental impacts or savings of conference attendees is readily available. Gardner (2006) cites research indicating that "during a typical five-day conference, 2,500 attendees may use 62,500 plates, 87,500 napkins, 75,000 glasses or cups and 90,000 bottles or cans." This translates to a daily, per-person average consumption rate of 5 plates, 7 napkins, 6 glasses or cups, and 7.2 bottles or cans. Using a similar approach, Spatarano and Wilson expect that:

In the category of Food and Beverage alone, it was projected that in three days 1,300 participants would use (not including meals on their own, exhibit hall concessions, and food consumed during set up and strike):

- 2,100 plates
- 27,300 cups
- 16,900 napkins
- 18,200 utensils
- 9,100 cans/bottles

This is equivalent to a daily, per-person average consumption of .54 plates, 7 cups, 4.33 napkins, 4.67 utensils, and 2.33 cans/bottles. Although Spatrisano and Wilson frame environmental impact estimates in terms of average consumption rates, their figures do not conform to the standard consumption rates quoted by Gardner.

In another example of the usefulness of per-person estimation of generated waste, Environment Canada’s Green Meeting Guide (2007) cites average greenhouse gas (GHG) emissions per person, depending on type of transport. The guide explains that the majority of the 300, 000 tons of GHG emissions produced by the transportation choices of the “45,000 delegates to the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa” resulted from air travel. The guide lists the GHG emissions per passenger km. *See Table 1.*

**Table 1 Green Meeting Guide**

<b>Transport type</b>	<b>Kg CO2 per passenger km</b>
Truck/SUV	0.36
Car	0.25
Air *	0.1046
Rail	0.1033
Bus	0.0587

\* Air travel produces 34.1 kg CO2 on take-off in addition to the 0.1046kg CO2 per passengerkm, making it the worst of the transport options listed here in terms of per-person GHG emissions.

Still another accounting method used by the Convention Industry Council (2004), figures consumption rates in terms of water and waste savings:

... if a five-day event serves 2,200 people breaks, breakfasts, lunches and receptions using china instead of plastic disposables, it prevents 1,890 lbs. of plastic from going into a landfill. That’s nearly one ton! Another example is that by not pre-filling water glasses at banquet tables during three days of served lunches for 2,200 attendees; 520 gallons of water can be saved.

Meeting Strategies Worldwide (2006) also uses this approach to note changes in pounds of emissions and gallons of gasoline per Greenbuild conference attendee as well as total amounts (by weight) of recycled, composted and landfill waste generated during the course of the conference.

In a final example of the variety of approaches to estimating environmental impact savings, BlueGreen Meetings describes the initiatives implemented during the CERES Conference by reference to their positive trade-offs:

Over the course of the two day event, 1,000 pounds of food waste was diverted from landfill and taken to Urban Oasis, an urban mini-farm that uses organic farming methods. The farm provides produce for the inner-city community at a fair price and helps educate the local youth on growing food, a healthy life, and protection of the environment. The 1,000 pounds of food waste collected at the conference fertilized enough produce to supply two of the three farmer's markets throughout an entire growing season.

Any of the above approaches has the potential to aid an organization in communicating goals, publicizing successful outcomes, and justifying future efforts. The choice of method is likely to influence (and be influenced by) the types of data available and by the purpose of and audience for this information. For example, eco-conscious facilities such as the Oregon Convention Center or the Hilton Hotels Corporation are able to track the energy used or waste generated during the course of a conference.

### *Economic Savings*

There seems to be a consensus that, while some environmental initiatives are initially more expensive to realize than others, all initiatives are at least cost-neutral (and likely cost-saving) over time. Unfortunately, the impact of eco-friendly policies on the economic bottom line is not well publicized. Like the foregoing environmental impact estimations, financial considerations and outcomes are not uniform or plentiful enough to singularly inform an organization's decision to green its conferences. Furthermore, conference costs are likely to be largely determined by event-specific factors that frustrate efforts to generalize.

Nevertheless, it is interesting to note that existing published financial-impact information points to a great opportunity to reduce the administrative and operational costs of conferences. For example, the Convention Industry Council Report (2004) states that "collecting name badge holders for reuse at an event of 1,300 attendees can save approximately \$975 for the event organizer." Spatrisano and Wilson report total savings of \$68,000 as a result of eco-friendly initiatives that included:

- Using online registration eliminated paper, printing and postage, saving \$3 for each registrant for a total savings of \$3,900.
- Not providing conference bags (\$9 for each attendee) saved \$11,700, plus shipping.
- Not providing a standard 15-page handout saved \$1,950.
- Providing water in pitchers instead of plastic bottles, at a rate of one bottle per participant, per day, saved \$12,187.
- Eliminating the need for buses by choosing hotels close to the convention center saved \$30,000 to \$40,000 for the three-day conference.

- Recycling plastic name badges at 75 cents each saved \$975.
- Serving condiments in bulk rather than individual packets is less expensive; i.e., bulk creamer is 62 percent cheaper, bulk sugar 50 percent cheaper.

Finally, there are a growing number of agencies and companies that offer financial and technical support that reduces the human resource burden of implementation. The EPA (WasteWise, WAVE, EnergyStar, etc.) and BlueGreen Meetings host pages of links to programs, grants, and cost-comparison tools.

### **Concluding Remarks**

There are solid economic, environmental and organizational reasons for advocating the greening of conference practices. There is also good reason to expect that academic organizations and their memberships will be receptive to eco-friendly initiatives, and that academic conferences might even help to further research into the practical and philosophical aspects of green conferencing.

In closing, it is important to resist the tendency to be overwhelmed by the lack of long-range, empirical data or the variety of potential environmental initiatives. At this point, it is clear that there is an array of practices that qualify as ‘low-hanging fruit’ that can be implemented by all conferences without delay. As Spataro and Wilson wisely note, “Environmental responsibility isn’t an all or nothing proposition. It doesn’t have to be 100 percent to have an impact. Every effort, no matter how small, makes a difference.”

## Appendix: Best Practices A-Z

There is a great number and variety of useful best-practice checklists and sample contracts available on the internet; to include them here would be redundant. Rather, the following charts are meant to provide an overview of primary issue categories (left-hand column), some examples of relevant best practices (middle column), and referrals to more detailed information (right-hand column). In addition, the Glossary in Appendix 2 of Environment Canada's Green Meetings Guide (2007) deserves special mention as a particularly useful tool for evaluating the claims of service providers and product descriptions.

### ***Establish Goals and Policies***

*Table 2*

<p>Identify areas for improvement</p>	<p>Hire a pre-event 'greening consultant'</p> <p>Seek methods for reducing operational and administrative burdens (i.e. on-line registration eliminates the need for labor hours dedicated to preparing, distributing and processing mailings)</p>	<p>Everett et al, 2006</p>
<p>Justify site selection</p>	<p>The conference city should be accessible by direct flights (in order to reduce emissions from multiple take-offs and landings).</p> <p>Conference proceedings should be centrally located with regards to lodging, entertainment and dining options, airport, and public transit</p> <p>The Oregon Convention Center is LEED certified, offers event organizers access to an on-site eco-team, and has an established program that allows the center to recycle around 40% of eligible materials annually</p>	<p>Libby, 2004</p> <p>Oregon Convention Center, 2007</p> <p>Environment Canada, 2007 (14)</p>
<p>Set selection criteria for service providers</p>	<p>Consider potential articulation with the local community: pre/during/post event involvement of local agents interested</p>	<p>Everett et al, 2006</p>

	<p>in disposing of waste materials (i.e. compost can be donated to urban community gardens)</p> <p>Establish guidelines for vendors specifying preferred and/or required practices</p> <p>Issue a procurement policy statement (see Environment Canada for a sample statement)</p> <p>Request the environmental rating of providers</p> <p>Certify compliance with environmental standards</p> <p>Consider possibility of using purchasing power to establish best practice requirements for awarding contracts</p>	<p>Green Seal, 2007</p> <p>Environment Canada, 2007 (11)</p> <p>Purdue University, 2003</p>
<p>Identify financial costs</p>	<p>Calculate costs of green products and services relative to previously-used items and services</p>	<p>BlueGreen Meetings, <i>Links and Resources</i></p>
<p>Identify financial solutions</p>	<p>State and federal incentives for energy and water conservation</p> <p>Request sponsorship by or product samples from green product providers</p> <p>Consider adjusting attendee fees to reflect additional costs to the organization</p> <p>Consider scaling attendee fees to award participants' green commitments (i.e. parking fees or travel subsidies linked to vehicle occupancy)</p>	<p>Bravo, 2006</p>

<p>Promote efforts; Cultivate support</p>	<p>Plan for environmental education for participants</p> <p>Raise awareness of the aggregate waste resulting from typical conference consumption</p> <p>Emphasize financial and social benefits of green practices</p> <p>Coordinate media relations; consider formal external and internal public relations campaigns</p> <p>Plan to collaborate with a variety of local communities:</p> <ul style="list-style-type: none"> <li>• Environmental</li> <li>• Municipal</li> <li>• Private business</li> <li>• Governmental agencies (particularly when the conference contracts with a state-owned and operated convention center)</li> </ul>	<p>Municipal Waste Reduction, 1999</p> <p>Environment Canada, 2007 (11)</p>
<p>Develop methods and tools for monitoring implementation and evaluating outcomes</p>	<p>Choose and follow a checklist</p> <p>Consider an external environmental audit for large events</p> <p>Identify a method for tracking changes to environmental and economic costs and savings</p> <p>Ask whether potential sites offer an in-house accounting method (i.e. Hilton Hotels' HER or Oregon Convention Center in-house waste recycling and recovery program)</p>	<p>Environment Canada, 2007</p> <p>Hilton Hotels, 2007</p> <p>Oregon Convention Center, 2007</p>



**Go Paperless:**

**Announcement, paper submission, registration and programs**

Table 3

<p>Eliminate waste (paper, ink, shipping)</p> <p>Increase networking opportunities (expand attendees' pre- and post- event contact opportunities)</p>	<p>Completely convert from paper-based to on-line conference announcement, publicity, and call for and submission of papers</p> <p>Use the on-line registration site to host:</p> <ul style="list-style-type: none"> <li>• carpool messaging board</li> <li>• conference programs</li> <li>• networking tools</li> <li>• environmental mission statement</li> <li>• educational materials</li> </ul>	<p>Mader, 2007</p> <p>SpaceShare, 2006</p>
<p>Increase participation</p>	<p>Offer virtual participation options (host on-line presentation materials, podcasts, conferencing)</p>	<p>Craigslist Foundation, 2006</p>
<p>Provide green commitment options for participants</p>	<p>Encourage attendees to bring personal utensils</p> <p>Facilitate carpooling to conference site</p> <p>Suggest or assist with the purchase carbon offsets (provide links or offer to match purchases)</p> <p>Identify and coordinate opportunities to engage with and support the local community (social services of all kinds)</p>	<p>Everett et al, 2006</p> <p>Bravo, 2006</p>

## Service Contracting

Table 4

<p style="text-align: center;">Lodging</p>	<p>Give preference to hotels with green certification</p> <p>Identify a central location (in relation to scheduled conference events, source of food, waste disposal site and services)</p> <p>Select based on provision of or agreement to adopt environmentally sensitive programs:</p> <ul style="list-style-type: none"> <li>• Linen reuse or on-demand washing only and low-flow regulatory units on showers and toilets to reduce water usage (average rate of consumption is 218 gallons per occupied room daily)</li> <li>• Eco-friendly cleaning products</li> <li>• Shuttle services (green fleet preferred)</li> <li>• Energy conservation and efficiency-use policies</li> <li>• Recycling program</li> <li>• On-site composting</li> </ul> <p>Conduct or request an environmental audit of the facility</p>	<p>USGBC, 2007</p> <p>Green Hotels, 2003</p> <p>Green Seal, 2007</p> <p>Hilton Hotels, 2007</p> <p>Wilson, Destination, 2006</p> <p>Environment Canada, 2007 (15)</p>
<p style="text-align: center;">Transportation</p>	<p>Secure subsidized rates for participants using local public transportation</p> <p>Provide on-site bike rentals and racks</p> <p>Give preference to companies adopting an anti-idling policy</p> <p>Promote carpooling to and during the conference</p>	<p>CERC, 2006</p> <p>SpaceShare, 2006</p>

	<p>Where air travel is necessary, encourage direct flights in order to reduce the high emissions produced during take-off and landing</p>	<p>Environment Canada, 2007</p>
<p>Food and Beverage</p>	<p>Consult the National Directory of Community-Supported Agriculture (CSA) groups</p> <p>Locate, support and publicize local farmers markets (listed by state by Agricultural Marketing Services)</p> <p>Favor food vendors using green utensils, plates and cups</p> <p>Favor in-season, organic, locally grown</p> <p>Compost locally donate leftovers</p> <p>Use only bio-degradable disposable flatware or china service</p> <p>Require supplier to verify environmental practices and product attributes (see Environment Canada for a sample)</p>	<p>Everett et al, 2006; Wilson College, 2007</p> <p>Agricultural Marketing Services MS, 2007</p> <p>Wilson, Choices, 2006</p> <p>Wilson, Basic Tips, 2006</p> <p>Environment Canada, 2007 (Appendix 3: 48)</p>
<p>Exhibition and Distribution Materials</p>	<p>Eliminate automatic distribution of large quantities of materials:</p> <ul style="list-style-type: none"> <li>• Buffet-style, self-serve distribution</li> <li>• On-demand printing only</li> <li>• Distribution on cd</li> <li>• Poster-style presentation</li> <li>• Referral to on-line location of programs, abstracts, papers, presenter information, etc.,</li> </ul> <p>Control printing wastes:</p> <ul style="list-style-type: none"> <li>• Two-sided printing</li> <li>• Soy- or vegetable-based, non-permanent inks</li> </ul>	<p>Mader, 2007 Everett et al, 2006</p>

	<ul style="list-style-type: none"> <li>• Locally refillable ink cartridges</li> </ul>	
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**Buildings Operations Management:**

**Waste Reduction and Disposal**

*Table 5*

Restroom Waste	<p>Paper:</p> <ul style="list-style-type: none"> <li>• Compost paper towels</li> <li>• Recycled-content paper towels and toilet paper</li> <li>• Air dryer for hands</li> </ul> <p>Water:</p> <ul style="list-style-type: none"> <li>• Low-flow toilets and showers</li> </ul> <p>Cleaning:</p> <ul style="list-style-type: none"> <li>• Bio-degradable, non-additive hand soap</li> <li>• Non-bleach, non-chlorine cleaning products</li> </ul>	Everett et al, 2006
Kitchen Waste	<p>Inputs:</p> <ul style="list-style-type: none"> <li>• Give preference to locally grown, organic, seasonal ingredients</li> </ul> <p>Outputs:</p> <ul style="list-style-type: none"> <li>• On-site kitchen composting</li> <li>• Reuse of cooking oils (local biofuels group or oil recycling agency)</li> </ul>	Mader, 2007
Energy Waste	<p>Utilize occupant-triggered temperature controls</p> <p>Utilize load-reducing controls</p>	Spatrisano, 2007

	<p>Install compact fluorescent lighting</p> <p>Reduce lighting and HVAC during set-up and strike of exhibitions</p>	
Participant Self-help	<p>Adopt a self-serve beverage policy; do not pre-serve water or ice</p> <p>Provide accessible, well-labeled recycling receptacles</p> <p>Ask participants to place plastic name tag holders into designated containers at the close of the conference for future reuse</p> <p>Recruit volunteers to assist with recycling education and sorting</p>	<p>Mader, 2007</p> <p>National Recycling Coalition, 2001</p>

### ***Post-Event Analysis***

***Table 6***

Social Outcomes	<p>Seek participant feedback:</p> <ul style="list-style-type: none"> <li>• On-line survey</li> <li>• On-line suggestion board</li> </ul> <p>Recognize and sustain partnerships created during conference</p> <p>Recognize scope of conference legacy:</p> <ul style="list-style-type: none"> <li>• Environmental</li> <li>• Social</li> <li>• Individual/Local/Organizational</li> </ul>	<p>Mader, 2007</p> <p>EcoLodgical, 2003</p>
Economic and Environmental Outcomes	<p>Conduct a post-event carbon audit</p> <p>Were operating costs decreased as a result of energy-conservation measures?</p>	

	<p>Did partners report increased profits?</p> <p>Were more local jobs created than lost?</p> <p>Does green meeting policy result in a notable change in the economic and employment multipliers of the conference?</p>	
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## References

- Agricultural Marketing Service (AMS). (2007). *Farmers Market Search*. Retrieved August 20, 2007 from <http://apps.ams.usda.gov/FarmersMarkets/>
- American Sociological Association. (1999). *Code of Ethics and Policies and Procedures of the ASA Committee on Professional Ethics*, pp. 6-7. Retrieved August 20, 2007 from <http://www.asanet.org/galleries/default-file/Code%20of%20Ethics.pdf>
- Belar, Cynthia. (2007) *Speaking of Education: Sustained efforts for sustainability*. Monitor on Psychology, 38(3):13.
- BlueGreen Meetings (NA). *CERES 2002 Conference: reducing waste at banquet functions - food donations and composting*, p. 1. Retrieved August 20, 2007 from <http://www.bluegreenmeetings.org/MoreSuccessStories.htm>
- BlueGreen Meetings. (2007). *Links and Resources*. Retrieved August 20, 2007 from <http://www.bluegreenmeetings.org/Links.htm>
- Bravo, Britt. (2006). *Could Blogger Be Green Next Year?* Retrieved August 20, 2007 from <http://blogger.org/node/8395>
- Coalition for Environmentally Responsible Conventions (CERC). (2006). *CERC Case Study: Greening the 2004 Republican and Democratic National Conventions*. Retrieved August 20, 2007 from <http://www.cerc04.org/resources/Legacy/2tabcon.htm>
- Craigslist Foundation. (2006). *NonProfit Resources: Non-Profit Boot Camp Online*. Retrieved August 20, 2007 from [http://www.craigslistfoundation.org/index.php?page=Nonprofit\\_Boot\\_Camp\\_Online](http://www.craigslistfoundation.org/index.php?page=Nonprofit_Boot_Camp_Online)
- Doyle, Scott D. (April/May 2006). *Environmental Sustainability in Conference and Event Services - Part I*, p. 1. ACCED-I: e-Communiqué. Retrieved August 20, 2007 from [http://www.acced-i.org/imis\\_web/StaticContent/3/Pub/Apr06/sustain.htm](http://www.acced-i.org/imis_web/StaticContent/3/Pub/Apr06/sustain.htm)
- EcoLodgical. (2003). *7: Conducting a Green Audit*. Retrieved August 20, 2007 from [http://ecolodgical.yourhomeplanet.com/index\\_audit.php](http://ecolodgical.yourhomeplanet.com/index_audit.php)
- Environment Canada. (2007). *Environment Canada's Green Meeting Guide*, Version 2.0, pp. 10-12. Retrieved September 12, 2007 from [http://www.greeninggovernment.gc.ca/F5B1C0BC-741C-4493-B4B7-B0D56BBE6566/Green\\_Meeting\\_Guide\\_07.pdf](http://www.greeninggovernment.gc.ca/F5B1C0BC-741C-4493-B4B7-B0D56BBE6566/Green_Meeting_Guide_07.pdf)
- Everett, Cybrena et al. (2006). *Guide to Greening Events*. Circle of Life. Retrieved August 20, 2007 from [http://www.circleoflife.org/pdf/action/col\\_green\\_guide.pdf](http://www.circleoflife.org/pdf/action/col_green_guide.pdf)

- Gardner, Seth. (2006). *Going Green*. *The Meeting Professional* 26(3): 1.
- “Green” Hotels Association. (2003). *Meeting Planner's Questionnaire*. Retrieved August 20, 2007 from <http://www.greenhotels.com/question.htm>
- Green Meetings Task Force. (June 2005). *Convention Industry Council's Green Meeting Report*, pp. 1-5. Retrieved August 20, 2007 from [http://www.conventionindustry.org/projects/green\\_meetings\\_report.pdf](http://www.conventionindustry.org/projects/green_meetings_report.pdf)
- Green Seal. (2007). *How to get a product/service certified*. Retrieved August 20, 2007 from <http://www.greenseal.org/getcertified/index.cfm>
- Hilton Hotels Corporation. (2007). *Hilton Environmental Reporting: Hilton Environmental Reporting Tool - HER*. Retrieved August 20, 2007 from [http://hiltonworldwide1.hilton.com/en\\_US/ww/business/environmental/report.do;jsessionid=A1CED0227A143CB230EDF3B221C8C930.etc12](http://hiltonworldwide1.hilton.com/en_US/ww/business/environmental/report.do;jsessionid=A1CED0227A143CB230EDF3B221C8C930.etc12)
- Libby, Brian. (2004). *Green Expansion for Oregon Convention Center*. Retrieved August 20, 2007 from <http://www.betterbricks.com/default.aspx?pid=article&articleid=389&typeid=3&topicname=sustainabledesign&indextype=#articletop>
- Mader, Ron. “Exploring Ecotourism: Green Events.” *Planeta.com: Global Journal of Practical Ecotourism*. Retrieved August 20, 2007 from <http://www.planeta.com/ecotravel/tour/greenfair.html>
- Meeting Strategies Worldwide Inc. (NA). *Green Meetings Case Study: Unitarian Universalist Association - General Assembly*. Retrieved August 20, 2007 from [http://www.meetingstrategiesworldwide.com/articles/UUA06\\_CaseStudy.pdf](http://www.meetingstrategiesworldwide.com/articles/UUA06_CaseStudy.pdf)
- Meeting Strategies Worldwide Inc. (2006). *Greening Greenbuild: Continuing to Grow and Innovate*, pp.1-5. Retrieved August 20, 2007 from [http://www.greenbuildexpo.org/documents/Greenbuild\\_2006\\_Greening\\_the\\_Conference.pdf](http://www.greenbuildexpo.org/documents/Greenbuild_2006_Greening_the_Conference.pdf)
- Municipal Waste Reduction Branch Solid Waste and Emergency Response (5306W). (1999). *The Measure of Success - Calculating Waste Reduction*. WasteWise Update, Report No. EPA530-N-99-003. Washington D.C., U.S. Environmental Protection Agency.
- National Recycling Coalition (2001). *Green Meetings Policy*, p. 2. Washington D.C. Retrieved September 20, 2007 from [http://www.resourcesaver.org/file/too\\_lmanager/CustomO16C45F42045.pdf](http://www.resourcesaver.org/file/too_lmanager/CustomO16C45F42045.pdf)



- Oregon Convention Center. (2007). *Green Building*. Retrieved September 14, 2007 from [http://www.oregoncc.org/pdf/occ\\_recyclingreport.pdf](http://www.oregoncc.org/pdf/occ_recyclingreport.pdf)
- Purdue University and the U.S. Environmental Protection Agency. (2003). *Information Contacts: Environmentally Sound Hotel Management, Sustainable Tourism and Ecotourism*. Retrieved August 20, 2007 from [http://cobweb.ecn.purdue.edu/~epados/hotel/src/contact\\_wv.htm](http://cobweb.ecn.purdue.edu/~epados/hotel/src/contact_wv.htm)
- SpaceShare. (2006). *Event Planner's Guide*. Retrieved August 20, 2007 from <http://spaceshare.com/planner/>
- Spatrisano, Amy and Nancy Wilson. (NA). *Greening a Global Conference: Lessons for the Future*, pp. 2-9. Meeting Strategies Worldwide Inc. Retrieved August 20, 2007 from [www.meetingstrategiesworldwide.com/docs/MSWW\\_Case\\_Study.pdf](http://www.meetingstrategiesworldwide.com/docs/MSWW_Case_Study.pdf)
- Superfactory. (2007). *Best Practices*, p. 1. Retrieved September 1, 2007 from <http://www.superfactory.com/topics/bestpractices.htm>
- U.S. Environmental Protection Agency. (2007). *Green Meetings: Links and Resources*. Retrieved August 20, 2007 from <http://www.epa.gov/oppt/greenmeetings/pubs/resources.htm>
- U.S. Green Building Council (USGBC). (2007). *Leadership in Energy and Environmental Design: What is LEED?* Retrieved August 20, 2007 from <http://www.usgbc.org/DisplayPage.aspx?CategoryID=19>
- Wilson College. (2007). *Robert Van En Center: Community Supported Agriculture (CSA)*. Retrieved August 20, 2007 from <http://www.wilson.edu/wilson/asp/content.asp?id=804>
- Wilson, Nancy J. (2006). *Basic Tips for Environmentally Friendly Meetings*. Retrieved August 20, 2007 from <http://www.meetingstrategiesworldwide.com/Articles.php>
- Wilson, Nancy J. (2006 ). *Choices - Making Food and Beverage Decisions*. Retrieved August 20, 2007 from <http://www.meetingstrategiesworldwide.com/FBCchoices.php>
- Wilson, Nancy J. (2006). *Destination Selection - Location, Location, Location*. Retrieved August 20, 2007 from <http://www.meetingstrategiesworldwide.com/Location.php>
- World Land Trust. (2005). *Offset with WLT*. Retrieved August 20, 2007 from <http://www.carbonbalanced.org/personal/pcoffset.htm>