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A How-To:
Conduct an Environmental Audit in Your Library

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I was fourteen when the first Earth Day was held in 1970. Fired with adolescent zeal, I started scouting for opportunities to put my passions to good effect. My first experience was pounding the pavement in my hometown, Seattle—you could still call Seattle a "hometown" back then. I knocked on doors in many neighborhoods, urging voters to pass a mass transit bill. Alas, the bill went down to defeat, and the matching federal funds went to San Francisco for their proposed project: BART (Bay Area Rapid Transit). My ardor was not dampened however, and ever since, environmental action has been a constant in my life. In the past year or so, I have been mulling over requesting permission from the library managers at OHSU to conduct an environmental audit of our buildings and practices. So, when asked if I would write an article for this issue, I jumped at the chance to get serious about the idea and to delve deeper into the logistics of an audit.

What I found boggled my mind. There are so many approaches and issues to consider, from small audits focused on specific topics to full-scale audits that consider every aspect from a systems point of view. The variety of audits can be overwhelming, but there is likely at least one type of audit that will fit your library.

What is an Environmental Audit?

An environmental audit is a diagnostic tool that provides a systematic, documented, and objective review of an organization's business practices that affect the environment. Environmental audits uncover deficiencies, identify corrective actions, and ensure compliance with environmental regulations. Increasingly, both for-profit and non-profit organizations are implementing environmental audits in order to address such critical issues as global warming, depletion of natural resources, and population growth.

Why Conduct an Environmental Audit?

Many of us work in the public sector. Taxpayers expect that we will provide services that benefit society, while using public monies wisely. Environmental audits can identify areas where greater efficiencies can be realized, saving money and benefiting the environment at the same time. For those of us who work for private academic institutions or corporate libraries, the arguments of efficiency and beneficial outcomes are as valid as for public institutions. Audits also support the deeper value of wanting to provide a healthy future for our children and other species of our planet.

A Word About Change

One of the assumed outcomes of an environmental audit is change. While an in-depth overview of change management is beyond the scope of this article, here are some reminders about the dynamics of strategic change.

- It is easier to create a desired future if you have a good handle on the present situation.
- It is easier to sustain change if you can see evidence of progress.
- Change efforts are more likely to be successful if staff members at all levels of the organization are involved.

The role of an environmental audit in the change process is to provide a realistic assessment of current practices and to identify actions that will lead to change. As with any change initiative, it helps to write a thoughtful mission statement. Listing goals and objectives will make it easier to set priorities.

Types of Environmental Audits

Audits come in all shapes and sizes, depending on the needs and resources of the organization. Some libraries may begin by focusing on one area, such as energy use. If enough staff members are interested, a broader assessment may be feasible. Academic libraries can collaborate with students and faculty in engineering or science departments in developing audit projects. Other libraries with more resources may choose to contract with an outside company that will conduct much more complex and deep evaluations. What is most important is to start with what you can do now. As you create success, you can always broaden the scope and size of your audits later.

The Audit Process

An audit has three phases: preparation, the actual audit, and post-audit activities. During the preparation stage, an audit team is formed. The audit team establishes goals, defines the scope of the audit, selects the sites to assess, and develops a plan. The actual audit gathers data, conducts SWOT analyses (Strengths, Weaknesses, Opportunities, Threats), and evaluates current practices. Once the audit is finished, the team writes up a report with recommendations for follow-up. Recommendations should establish a policy of periodic reviews of the initial audit.

Type of Audit (Scope)	Purpose
Comprehensive	Approach is both broad and deep; aims to assess all aspects
Preliminary	Basic information concerning the library; history of building; facility permits; etc.
Single Purpose	Focuses on one particular aspect

Type of Audit (Focus)	Purpose
"Carbon Footprint"	How much carbon is emitted into the atmosphere as a result of your library's business practices?
Compliance with environmental regulations	Do you know which regulations affect your library (federal; state; local)? Does your governing organization have additional environmental policies?
Energy	How much energy does your library use for lighting? Heating and cooling? Transportation?
Source Management	Where do your library's resources come from? Do you order from companies committed to sustainable practices?
Waste Management	Does your library have recycling policies in place? Are there efforts to reduce waste volume?

Starting Small

For many libraries, finding the time and money to conduct a comprehensive audit is daunting. Choosing a small, specific goal is a perfectly valid approach with many benefits:

- You enhance the chances of success by keeping the goal focused and realistic.
- You are less likely to become overwhelmed if the project is small.
- You may attract more interested participants if they see that their time commitment will not be substantial.
- A single, simple goal is easier to fold into current policies and procedures than many, complex goals.

For example, perhaps your library would like to reduce electricity use by 10 percent. A straightforward audit technique would be to collect the electrical bills for the past year and graph the data. Obtaining this information may be easier in some library systems than others. TriMet, the public transportation provider for the greater Portland area, posted graphs of their electrical use in staff elevators and saw a 20 percent drop in their monthly bill without taking any other action!

Another simple audit might be to assess the greenhouse gases produced by your library's energy use, commonly referred to as a "carbon footprint." Typically, heating, lighting and transportation uses are measured. Some calculators include paper use as well. A link to help estimate your library's carbon footprint is listed in the Resources section.

Building Momentum

Library staff can easily conduct more detailed audits if time permits. A Source Management audit investigates which vendors use environmentally friendly processes or materials. Some of this information can be found at the vendor's Web site. Sales representatives are another source. Purchasing decisions can be prioritized based on the data. For example, the most recent Harry Potter book, published by Scholastic, was printed on paper with high recycled content. Although there are a number of audit software programs available, this type of research can be tracked using a spreadsheet program.

Conducting an Energy Audit can be as simple as walking through your library and answering the questions on the worksheet that follows. Since energy use varies by time of day and season, the audit should be conducted a number of times in order to capture the variance. The worksheet can be used to establish priorities and perhaps trigger a Single Purpose Audit.

Bringing in the Pros

While library staff can effectively conduct many types of audits, there are a number of reasons why a library might want to hire a professional company to assess the organization. Professionals are familiar with the current legal environment and are more experienced in making sure regulations are being met. They have access to tools and experience that can provide more accurate estimates of savings and costs. They are aware of standards, such as ISO 14000, an international standard for environmental management systems, which establish benchmarks for assessment.

A professional audit will review all of the factors listed above, such as energy, source, and waste management. The auditors will also assess the building shell, air emissions, water systems, the HVAC (heating, ventilation, air conditioning) system, and any materials in the building that might be toxic, like carpets, paint, old plumbing, etc. A good professional audit team will make sure that factors are not analyzed in isolation, but as a system. They will work with library staff in developing recommendations, procedures and performance measures.

Basic Energy Audit Worksheet

Heating	
What kind of fuel is used for heating?	
What is the temperature?	
Has the HVAC system been serviced in the past year?	
How hot is the hot water?	
Do all areas need to be fully heated?	
Is there a room thermostat? Is it set to the correct temperature?	
Are there any obstructions in front of radiators or vents?	
Are there any draughts coming in from windows or doors?	
Lighting	
Are lights switched off where necessary?	
Are incandescent or large diameter fluorescent lights used?	
Are lamps, fitting and roof lights clean?	
Are light switches easy to find? Are they labeled with reminders to turn off?	
Are exterior lights turned off when not needed?	
Office	
Do computers have built-in energy saving features? Are they activated?	
Are computers left on overnight?	
Are monitors switched off when not in use?	
Are photocopiers energy efficient?	
Are printers and photocopiers left on overnight / weekends?	
Are water coolers left on permanently?	
Transportation	
Does your library use bookmobiles? If so, what type of fuel do they use? What mileage per gallon do they get?	
What kind of transportation do staff use to get to work?	
What kind of transportation do staff use to attend conferences and workshops?	

If your library is planning any substantial renovations, the time could be ripe for a professional review. Oregon is fortunate to have many fine environmental audit firms. You will find many listed on the Sustainable Oregon Web site (see the Resources section).

One Step at a Time

Environmental audits can be as focused or as broad, as simple or as complex as you want to make them. At OHSU Library this winter, we hope to work with our Disaster Recovery Team as they conduct their biannual facilities assessments. We'll probably use the Basic Energy Audit worksheet to start. But whether you start small, or leap into a full-scale audit, the important thing is to take the first step. Libraries have always been stewards of our cultures. Here is an opportunity to become stewards of our planet.

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Nattrass, B. F., & Altomare, M. (1999). *The natural step for business.* Gabriola Island, BC: New Society Publishers.

Resources

Greener World Media. GreenBiz.
http://www.greenbiz.com
This site has a wide variety of articles, tips and recommendations for implementing sustainable business practices.

The Natural Step International.
The Natural Step.
http://www.naturalstep.org
The Natural Step is a systems-oriented approach to sustainability based on scientific principles that promote environmentally responsible business practices.

Oregon Economic and Community Development Department. Sustainable Oregon.
http://www.sustainableoregon.net
Sustainable Oregon is a collaborative site established by the Governor's office and a variety of for-profit and non-profit organizations to promote environmental sustainability. The site contains articles, toolkits, links and other resources.

Planktos, Inc.
Planktos Carbon Footprint Calculator
http://www.planktos.com/carbonstore/CarbonFootprintCalculator.html
Choose the business calculator which uses square footage, energy and heating use, and air travel to determine your library's carbon footprint. The site also has a calculator for events.

U.S. Environmental Protection Agency—U.S. Department of Energy. Energy Star.
http://www.EnergyStar.gov
Energy Star is a federal program that promotes energy efficiency for both private citizens and businesses.

The University of Wisconsin—Madison SLIS Working Group. Libraries, Information and Sustainability.
http://uw-slis-sustainability.blogspot.com/