Sustainability Planning for Libraries

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What is Sustainability?
Why Is It Important?
CLIMATE SUMMIT

WHAT IF IT'S A BIG HOAX AND WE CREATE A BETTER WORLD FOR NOTHING?

- ENERGY INDEPENDENCE
- PRESERVE RAINFORESTS
- SUSTAINABILITY
- GREEN JOBS
- LIVABLE CITIES
- RENEWABLES
- CLEAN WATER, AIR
- HEALTHY CHILDREN
- ETC. ETC.
“Pollution is nothing but the resources we are not harvesting. We allow them to disperse because we've been ignorant of their value.”
– R. Buckminister Fuller
Developing a Sustainability Plan
Sustainability planning at a glance

- Form a green team
- Calculate your current environmental footprint
  - Gather baseline information about your impact
- Identify your long-term sustainability goals and the data you need to measure progress
- Figure out what you’re already doing right
- Develop an action plan based on your long-term goals
- Track your progress, publicize your results, and keep improving
How do I form a green team?

- Identify personnel in your library that are familiar with major operations and services
  - Operations/facilities
  - Purchasing
- Include people who are enthusiastic about promoting environmentally responsible practices in the workplace
- Be creative
  - Ask for volunteers
  - Look for people at all levels and responsibilities
- Correlate the number of people on the team to the size of your staff
- Choose a coordinator
- Team must have authority to set goals and implement actions to achieve those goals
Which library activities impact the environment?

- Building operations and maintenance
  - HVAC
  - Building materials
  - Cleaning products
  - Pest management
- Office operations
  - Printing
  - Copying
  - Weeding
  - Technical processing
  - Circulation functions
  - Paper use
  - Electronics use

- Landscaping
  - Watering
  - Planting
  - Mowing
- Purchasing
  - Computers/Electronics
  - Supplies
- Food service
  - Meeting rooms
  - Library café
  - Staff break area
- Building renovation
How do you inventory your library’s impact?

- Energy use
  - HVAC
  - Lighting
  - Computers
- Waste generation
  - Office paper
  - Food waste
  - Old computers
- Resource consumption
  - Water
  - Paper
- Purchased products that contain hazardous materials
  - Pesticides
  - Cleaning products
  - Computers
What is the cost of the library's impact?

- Evaluate both quantity and cost
- Energy & water consumption
  - Utility bills $\rightarrow$ costs and quantities
- Total waste generated
  - Bills from waste hauler
  - Building walk-through when trash cans are full
  - Waste audit
    - Visual inspection of waste cans
    - Sample and weigh the building’s wastes (AKA dumpster diving)
- Hazardous chemicals used
  - Cleaners, pesticides, etc.
## Draw Yourself a Picture

<table>
<thead>
<tr>
<th>Operations</th>
<th>Activities</th>
<th>Resources used</th>
<th>Waste generated</th>
<th>Hazardous chemicals</th>
<th>Environmental impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building maintenance</td>
<td>Interior cleaning</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>-- Indoor air quality</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-- Worker exposure</td>
</tr>
<tr>
<td></td>
<td>Lighting</td>
<td>x</td>
<td>x</td>
<td></td>
<td>-- Electricity use</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-- End of life disposal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-- Air emissions</td>
</tr>
<tr>
<td></td>
<td>HVAC</td>
<td>x</td>
<td>x</td>
<td></td>
<td>-- Gas use</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-- Air emissions</td>
</tr>
<tr>
<td>Office operations</td>
<td>Printing/copying</td>
<td>x</td>
<td>x</td>
<td></td>
<td>-- Disposal of waste paper</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-- Paper use</td>
</tr>
<tr>
<td></td>
<td>Office equipment</td>
<td>x</td>
<td>x</td>
<td></td>
<td>-- Energy use</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-- Air emissions</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>-- End of life disposal</td>
</tr>
<tr>
<td></td>
<td>Weeding</td>
<td></td>
<td></td>
<td>x</td>
<td>-- End of life disposal</td>
</tr>
</tbody>
</table>
What do you want to accomplish?

- Establish both short and long term goals
- Rethink your practices and make yourself stretch
- Be realistic
- Ask yourself how you can do things in a more efficient way
  - Evaluate your activities by considering their environmental impact
- Make your goals specific and measurable
  - “We will reduce energy use by 30%”
How do you measure it?

- Sustainability indicators are measurements that help you track your improving environmental footprint

- Examples
  - Energy and water consumption
  - Total waste generated
  - Percentage of solid waste recycled
  - Average post-consumer recycled content of paper purchases
  - Purchases of products with hazardous materials
What are you already doing?

- Create a baseline so you can measure your progress
  - Energy use → How much electricity and gas are you using?
  - Waste → How much are you throwing away? What and how much are you recycling?
  - Purchasing → Are you buying green products?
- Identify the environmental benefits of your current practices
- Discuss barriers to implementing current practices and ways you have overcome them
How do you develop ideas for new projects?

- Compare what you’re already doing with your long-term goals
- Develop a list of potential projects
  - Include both large and small
    - If you do a major building remodel...
    - If you had to implement something tomorrow
  - Research what other libraries are doing
  - Look at best practices for government agencies
  - Brainstorm & use your resources
    - Ask for suggestions from your staff, your board, and your patrons
Which project should you do first?

- Prioritize your list
- Things to consider
  - Will the project have environmental benefits?
  - Are the benefits significant?
  - Will the project result in cost savings over the life of the action/product? If yes, how much?
    - Calculate simple payback (Total cost of project/annual savings = number of years until payback)
  - Is the time frame and ease of implementation manageable?
  - Do you have control over the action?
  - Is the issue of significant concern to your staff and/or patrons?
  - Does the action have high visibility and/or educational value?
- Finalize the list by giving highest priority to things that have the most yes answers
How do you get it done?

- Break each project down into discrete tasks with measurable goals, when practical
- Assign staff/team members that will be responsible for completing each task
- Assign a deadline for completing each task
- WRITE IT DOWN!
<table>
<thead>
<tr>
<th>Sustainability goal</th>
<th>Measure of success</th>
<th>Specific tasks</th>
<th>Assigned staff</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decrease building energy use by 30%</td>
<td>Lower energy bills</td>
<td>Solicit ideas from staff</td>
<td>Green team leader</td>
<td>July 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Change to CFL light bulbs</td>
<td>Maintenance</td>
<td>August 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shut down/sleep public access computers at night</td>
<td>IT</td>
<td>September 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Set thermostats to reduce energy use during hours library is closed</td>
<td>Maintenance</td>
<td>August 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Encourage staff to turn off lights when leaving break room</td>
<td>Green team</td>
<td>July 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Publicize cost savings to board &amp; public</td>
<td>Director</td>
<td>December 2010</td>
</tr>
</tbody>
</table>
How do you keep it going?

- Look for opportunities to integrate sustainability into routine decision-making functions like strategic planning and budgeting
  - Ensure that sustainability is an ongoing part of your library’s business, regardless of individual or group commitment
- Identify key decision points and investigate opportunities to consider sustainability
  - When products are purchased
  - When projects are approved in budget meetings
  - When planning for building renovation or construction
How do you get buy-in from your staff & the public?

- Educate staff
  - Free or low cost workshops
  - In-service training
- Post reminders (recycle paper, bring your lunch, ride your bike, turn off lights). Change them up to keep them fresh.
- Keep it fun. Reward people for good ideas and for modeling sustainable practices.
- Integrate sustainability into library programming.
- Provide updates on the progress of your initiatives to your staff, your board, and your patrons.
- Let your staff, board, and patrons review your draft sustainability plans.
- Encourage new ideas.
What else can you do?

- Tell your board, your staff, and your public
  - Include on your web site and your annual report
  - Translate dollars saved into metrics they understand (x number of DVDs added to the collection).
- Apply for an Illinois Governor’s Sustainability Award
- Don’t put your plan in a drawer and forget about it
  - Evaluate and revise based on what works and what doesn’t
- Ask for assistance
  - ISTC → http://www.istc.illinois.edu
  - Smart Energy Design Assistance Center → http://smartenergy.arch.uiuc.edu/
Think ahead to avoid derailment
Where to Go for More Information
Don't break the bank
Green Spring Short Term Offer

Public Sector Electric Efficiency

The Illinois Energy Office announces a significant short-term increase in electric efficiency rebates for public projects located in ComEd and Ameren Illinois Utilities electric service territories. The enhanced rebates will allow schools and governments in Illinois to implement cost-saving electric efficiency improvements. These improvements will save energy, reduce utility bills, and create Illinois jobs.

2010 SPECIAL LIMITED TIME OFFER

HAVE A GREEN SPRING!

Incentives:

- **Incentive Bonus** – Illinois public universities, and state and federal facilities are eligible for a 15% Incentive Bonus on top of the normal DCEO rebates for energy efficiency projects.

- **Special Incentive Rate** – Illinois public schools, community colleges and units of local government are eligible for a Special Incentive Rate that is double the current rebate levels.

Applicants are encouraged to apply for these special DCEO energy efficiency incentives by this Earth Day, April 22. Projects must be completed by May 31, 2010.

To apply for the Have a GREEN SPRING! rebates:

- Read the Addendum to Public Sector Electric Efficiency Guidelines for details on this special offer.

- Fill out the normal Public Sector Electric Efficiency Program application forms and submit them to illinois.energy@illinois.gov.

- DCEO staff will determine eligibility and the amount of the bonus rebate.

- The application forms are available at:
  - Guidelines, Application, Worksheets (as a pdf)
  - Application and Standard Incentive Forms in Excel format. (Use these spreadsheets to fill in the Application from Appendix A and Standard Incentive Worksheets from Appendix B: Lighting, HVAC, Motors, ...)
Welcome to Illinois Clean Energy Community Foundation

The Illinois Clean Energy Community Foundation invests in clean energy development and land preservation efforts, working with communities and citizens to improve environmental quality in Illinois. The Foundation supports programs and projects that will improve energy efficiency, develop renewable energy resources and preserve and enhance natural areas and wildlife habitats throughout the state.

The Foundation's programs have grown steadily since it awarded its first sets of grants in 2001. Over the last seven years, the Foundation has awarded 2859 grants, totaling $151 million to Illinois nonprofit organizations, schools, municipalities and other local government agencies. The grants support activity in all of our 102 counties in the state of Illinois.

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2009 Grant Deadlines

Competitive Cycles
January 20, 2009
July 20, 2009

* Child Care Lighting Upgrades
February 16, 2009

* College & University Lighting Upgrades
February 16, 2009

Historic Courthouse Lighting Upgrades
March 17, 2009

Public Safety Facilities Lighting Upgrades
March 17, 2009

K-12 School Solar PV System Upgrades
March 27, 2009

2009 Lighting Upgrades Application

Green Building Design & Commissioning Program Guidelines
DSIRE is a comprehensive source of information on state, local, utility, and federal incentives that promote renewable energy and energy efficiency. Choose one or both databases to search:

- Renewable Energy
- Energy Efficiency

Federal Incentives

US Territory Incentives

Last Updated: 05/15/08
**ENERGY STAR Computer Power Management Savings Calculator**

*Instructions: Use this simple calculator to estimate typical savings from ENERGY STAR qualified computers and/or power management features. (required fields in red)*

### ENERGY STAR Qualified Computers and Monitors

Enter the number of ENERGY STAR qualified:
- a) Computers used and/or to be used in place of standard computers
- b) LCD monitors used and/or to be used in place of CRT monitors

<table>
<thead>
<tr>
<th>Desktop</th>
<th>Notebook</th>
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</thead>
<tbody>
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</tbody>
</table>

### Power Management Features

Enter the number of desktops* and notebooks* that are configured and/or will be configured to automatically enter:
- c) "Standby" or "hibernate" mode when inactive (i.e., CPU, hard drive, etc. go to sleep)
- d) "Monitor shut down" mode when inactive (i.e., monitor/display goes to sleep)

<table>
<thead>
<tr>
<th>Desktop</th>
<th>Notebook</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

### Assumptions

- e) Enter cost of electricity OR select the state in which the computers are operated, and choose commercial or residential service
- f) Roughly what percentage of your computers are currently turned off each night and during weekends, holidays and vacations by users?**

<table>
<thead>
<tr>
<th>State</th>
<th>Commercial</th>
<th>Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois</td>
<td>$0.088</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.800</td>
</tr>
</tbody>
</table>

**Default of 36% as the percentage of computers turned off each night is based upon 2004 Lawrence Berkeley National Lab Report entitled "After-hours Power Status of Office Equipment and Inventory of Miscellaneous Plug-Load Equipment"**

***If your organization always shuts off their monitors at night, the turn off rate should be set to 100%.

### Notes about defaults and assumptions in the Quick Calculator:
1) Assumes standard monitor is a CRT monitor and an ENERGY STAR qualified monitor is an LCD monitor.
2) All other assumptions can be seen by clicking the red "Adjust" tabs below.

After completing this page, click the green "Results" tab below to view your estimated savings OR click the red "Adjust" tabs below to perform customized calculations of energy savings specific to your environment.

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*Includes both ENERGY STAR and non-ENERGY STAR

**36 percent of the time turned off

Use Other Turn Off Rate? No

Other Turn Off % 36%
WaterSense has a fan page! Become a fan today >

DID YOU KNOW?
WaterSense labeled showerheads are tested and certified to ensure performance.

Save water and protect the environment by choosing WaterSense labeled products in your home and business and taking simple steps to save water each day. Learn more about WaterSense and what you can do to help make every drop count.
Greenhouse Gas Equivalencies Calculator

UPDATED March 2010. Several of the conversion factors in this calculator have been updated or revised. See the revision history page for more details.

Did you ever wonder what reducing carbon dioxide (CO₂) emissions by 1 million metric tons means in everyday terms? The greenhouse gas equivalencies calculator can help you understand just that; translating abstract measurements into concrete terms you can understand, such as "equivalent to avoiding the carbon dioxide emissions of 161,000 cars annually."

This calculator may be useful in communicating your greenhouse gas reduction strategy, reduction targets, or other initiatives aimed at reducing greenhouse gas emissions.

Enter Your Data Below

There are two options for entering reduction data into this calculator.

Option 1: If You Don't Have Emissions Data

1. If you are starting with data in units of "gallons of gasoline consumed," "kilowatt hours of electricity," "therms of natural gas," or "passenger vehicles per year" instead of a quantity of emissions of specific greenhouse gases, use this option.
2. Enter a quantity and pick the desired unit below; and
3. Click on the "Calculate Equivalent" button to convert your value to Carbon Dioxide Equivalent.
4. If you are entering kilowatt-hours of electricity, please be sure to read the caveats and explanations on the Calculations and Reference page.
5. Please note that these estimates are approximate and should not be used for emission inventory or formal carbon footprinting exercises.

Click Here for Calculations and References

Option 2: If You Already Know the Quantity of Emissions

If you have already estimated the quantity of emissions (e.g., metric tons of carbon dioxide equivalent), you can input the amount of emissions and select the appropriate units for the corresponding greenhouse gas type.

<table>
<thead>
<tr>
<th>Amount</th>
<th>Unit</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tons</td>
<td>1</td>
<td>Carbon Dioxide or CO₂ Equivalent*</td>
</tr>
<tr>
<td>Tons</td>
<td>1</td>
<td>Carbon or Carbon Equivalent</td>
</tr>
<tr>
<td>Tons</td>
<td>1</td>
<td>CH₄ - Methane</td>
</tr>
<tr>
<td>Tons</td>
<td>1</td>
<td>N₂O - Nitrous Oxide</td>
</tr>
<tr>
<td>Tons</td>
<td>1</td>
<td>HFC-23 - Hydrofluorocarbon gases</td>
</tr>
<tr>
<td>Tons</td>
<td>1</td>
<td>CF₄ - Perfluorocarbon gases</td>
</tr>
</tbody>
</table>
Ecolabels can help you find green products. This site helps companies and consumers use them. You can browse, search or learn more about ecolabels below.

**Ecolabelling.org helps you to**

- **Build a Green Purchasing Strategy for Your Business.**
  Find out how your company can use ecolabels.

- **Buy Green Products.**
  The companies advertising on this site use ecolabels to assure you their products are green.

- **Sell Your Green Products on this Site.**
  Use ecolabels to ensure consumers trust your green marketing.

There are so many certifications, accreditations and seals of approval out there it's hard to tell what's what. The idea is that the site lays out all the known labels in one place....
Environmental News Bits is also on Twitter (click the link to the left to follow @EnvironmentalNewsBits). I often retweet interesting stories there without posting them here. Now you can see them here too. Page down to read the latest blog posts.

Twitter / EnvironmentalNewsBits

- EnvironmentalNewsBits: Citizens invited to view and comment on draft wastewater permit for U.S. Steel Gary Works http://bit.ly/13sUr0 via @CityWaste
- EnvironmentalNewsBits: Please drink responsibly, ST-Sierra Magazine Beer made with rainwater! http://bit.ly/1375v5 via @ChicagoSun
- EnvironmentalNewsBits: Alaskan99: Boom Raises Concerns - Read the full post at Green Inc. Proprietors of oilspills, the seal once he http://bit.ly/13t4Ue
- EnvironmentalNewsBits: Web Site Tracks Ozone Depleting Clean Energy Growth - Read the full post at green Inc. The European Commission this week... http://bit.ly/13t4Ue
- EnvironmentalNewsBits: Lester Brown, whose new book Plan B 2.0: How to Fix the World Before It's Too Late, now global warming is "Priest's Scheme" http://bit.ly/13ZK7p via @Cloudskulk
- EnvironmentalNewsBits: Recycling your cell phone is about to get much easier, and in some cases profitable. http://bit.ly/13ZK7p via @YahooGreen
- EnvironmentalNewsBits: What to Eat and Not: Don't Eat Anything That Took More Energy to Ship Than to Grow. (via @tinytimesnews) http://bit.ly/13ZK7p via @Cloudskulk
- EnvironmentalNewsBits: Is the great green hype? New study says it may be short lived, sources say of rule http://bit.ly/13ZK7p via @HuffingtonPost
- EnvironmentalNewsBits: 10 must-read countries are getting more efficient http://bit.ly/13ZK7p via @TheEncyclopedia

Comments [0]

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Laura Barnes on Delicious

Published under: New Resources — Laura R. @ 12:36 PM 11/05/2010

Below are my five most recent bookmarks on Delicious. There’s a link at the end if you want to join my network. Page down to read the most recent blog posts.

- NRC’s Green Council / National Research Council - http://nrc.gov/scienceboarding.html The Green Council tackles basic green challenges across all the agency’s missions. The site is designed primarily for students in fifth through eighth grade, but also offers information for younger and older students as well as parents and teachers.
- Environmental Education LUGO / SafeTeam environmental education NCC The Green Lugo teaches kids about the relationship between their school and environmental and health issues. The site is designed for students in fifth through eighth grade, but also offers information for younger and older students as well as parents and teachers.
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Comments [0]

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October 9, 2009

Farmers use vending machines to sell produce

Published under: Agriculture/Local - Laura R. @ 9:08 PM 11/05/2010

Read the full story at Mother Nature Network.

In today's world of complex supply chains, international supermarkets and big agribusiness, it's become more and more difficult for small farmers to sell their produce directly to local consumers at a reasonable price. But one farm in Germany, Pader-Nord-Hallertau, thinks they may have found a solution: set up vending machines which distribute produce instead of junk food.

Comments [0]

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Opinion: Why environmental groups are wrong about e-waste

Published under: Computing/Consumer electronics - Laura R. @ 12:36 PM 11/05/2010

Read the full story in ComputerWorld.

Environmental groups like the Silicon Valley Toxics Coalition, Friends of the Earth and Greenpeace, among others, have been in the news lately, calling gadget makers in general and Apple in particular for bad environmental policies. They're bringing attention to the growing mountains of toxic PCs, cell phones, iPods and other electronics in landfills and pushing governments for "green" regulation.

This problem is real, and I applaud these and dozens of other organizations that are working to make a difference. But their prescriptions for consumer action — what they want you and me to do about e-waste — is actually bad for the environment. I'll tell you why in a minute. I'll also outline a superior alternative to the recycling they are demanding. But first, let's review the problem.

Comments [0]
Setting an example is not the main means of influencing others; it is the only means. -- Albert Einstein