Sustainability Task Force

A Committee of the Chico City Council
Vice Mayor Schwab, Chair

Meeting of December 3, 2007 – 3:00 p.m. to 5:00 p.m.

Council Chamber Building, 421 Main Street, Conference Room No. 1

AGENDA

1. **Update on Council Workplan approval and ICLEI audit**

2. **Representative to attend General Plan Advisory Committee** – *tabled from last meeting*

3. **Committee Reports:**

- Business — *Jim Goodwin and Scott McNall*
- Building/PG&E Incentives — *Chris Giampaoli, Jason Bougie, Jim Stevens*
  - **Attached article:** *Developing Green Building Programs or Ordinances*
  - **Attached article:** *The City of Chicago Green Permit Program*
- Website — *Linda Herman*
- Personal Footprint — *Ann Schwab*
  - **Attached samples**
- Community Outreach — *Scott Wolfe*
- Alternate Transportation — *Julian Zener*

4. **Next meeting date:**

- December 17th or January 7th

5. **Business from the Floor –** Members of the public may address the Committee at this time on any matter not already listed on the agenda, with comments being limited to three minutes. The Committee cannot take any action at this meeting on requests made under this section of the agenda.

6. **Adjournment** – The meeting will adjourn no later than 5:00 p.m. The next meeting of the Sustainability Task Force is scheduled for December 17, 2007 - unless cancelled. All meetings are held from 3:00 p.m. – 5:00 p.m. in Conference Room No. 1.

Distribution available in the office of the City Clerk*:*

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Members:

Dr. Scott G. McNall	Ken Grossman	Jim Pushnik	Kristin Cooper - Carter
Anthony Watts	Jason Bougie	Tom DiGiovanni	Amelia Gulling
Julian Zener	Jim Goodwin	Jon Luvaas	Chris Giampaoli
Jim Stevens	Scott Wolf	Tami Ritter	Ann Schwab, Chair

Developing Green Building Programs or Ordinances

by Peter Bruck, LEED AP

Concerns about resource depletion and global warming are changing the dynamics and scope of the building code profession in the U.S., with more and more jurisdictions across the country adopting measures to encourage—and in some cases, require—the implementation of "green" building features in new construction and the renovation projects of existing structures.

While no single approach is going to work for every situation, City of Rohnert Park, California, provides an example of how to embark on the road to more responsible development. In May 2005, Rohnert Park joined the other eight cities in Sonoma County in agreeing to pursue the goal of reducing greenhouse gas emissions throughout the community to 25 percent below 1990 levels by 2015 (after having already set the goal the previous year of reducing greenhouse gas emissions by city government operations by 20 percent of 2000 levels). Following a great deal of research and collaborative effort, city staff succeeded in developing a Green Building Ordinance which was subsequently adopted by the Rohnert Park City Council effective July 1, 2007.

Laying the Groundwork

Staff began by determining that a mandatory approach would not only place less of a demand on city resources and result in greater numbers of green buildings than a voluntary program but, if backed by the general public, would be acceptable to most local developers.

With this in mind, they began researching green building ordinances in place in other jurisdictions and came across one adopted by the City of Pleasanton in nearby Alameda County to use as a model. This saved a great amount of time during the initial development process and had the added benefit of making it easier for local builders to familiarize themselves with the new ordinance, illustrating that—as with all codes and standards—regional consistency in green building ordinances and guidelines can go a long way towards gaining compliance.

Building Support

One of the most important lessons learned during the development of Rohnert Park's Green Building Ordinance was the value of the public process. The more opportunities people were given to be heard, the more the ordinance gained in public support.

Rohnert Park staff held several public meetings with the City Council and Planning Commission, including a Sustainability Workshop that attracted individuals with interests focused on concerns such as water conservation, transportation, solid waste management and universal design, as well as green building advocates. This workshop led to the creation of a new "Sustainability" title in the city's *Municipal Code* which, once established, will contain the requirements for most issues related to the subject.

Establishing Guidelines

When considering which green building guidelines to use for a new program, jurisdictions should strongly consider referencing recognized standards and inspection service programs. It is also critically important to consult with legal counsel to ensure that a potential green building program or ordinance does not conflict with other state or local regulations. Similarly, partnering with third-party organizations that provide green building training, certification, plan checking or inspection services can significantly reduce the load on building department staff and help facilitate buy-in by the private sector. Utilization of outside guidelines and resources can be especially helpful for voluntary programs by minimizing "interest drift" on the part of designers and builders.

An important point for mandatory programs is, if possible, to defer the subject of compliance thresholds until the end of the development process because once the topic arises, the ensuing debate tends to supersede other issues. Finally, jurisdictions should keep an eye on the "triple bottom line" so that environmental, economic and social equity issues are equally addressed throughout the ordinance development process.

Marshaling Resources

Staffing and funding nearly always pose challenges when projects like the development of a new ordinance come along. Whatever the subject of the proposed ordinance, jurisdictions should find a "champion" on staff who has a desire to head the project and help ensure that it moves forward at a steady pace. In this case, someone with an interest in green building can be expected to make more progress than a staff member who views the project as simply another time-consuming task. Sources of funding beyond the normal channels should also be considered, including solid waste agencies, utilities and other revenue-generating departments that may stand to benefit.

Once the ordinance itself has been written, costs associated with the development of an implementation plan should not be overlooked, and the day-to-day green building plan check and inspection processes will also need funding once that plan is in place. For Rohnert Park, a fee study coincided with the implementation of the new ordinance, resulting in the inclusion of the green building plan check and inspection fees in the new fee schedule.

Also, bear in mind that green building training will be necessary—not just about the basics, but advanced levels as well—for all individuals associated with the program. Staff members and contractors alike will need to understand how the program or ordinance is structured and how it interacts with the green building guidelines in use, and everyone involved should be aware of the specifics of how the selected rating system will be applied.

Conclusion

Just as green building requires an integrated approach to design and construction, so does the development of a green building program or ordinance. One can start with a list of "things to do," but the difference between a basic list and a fully functional and viable program is the ability to create processes and regulations that are easy to understand and implement.

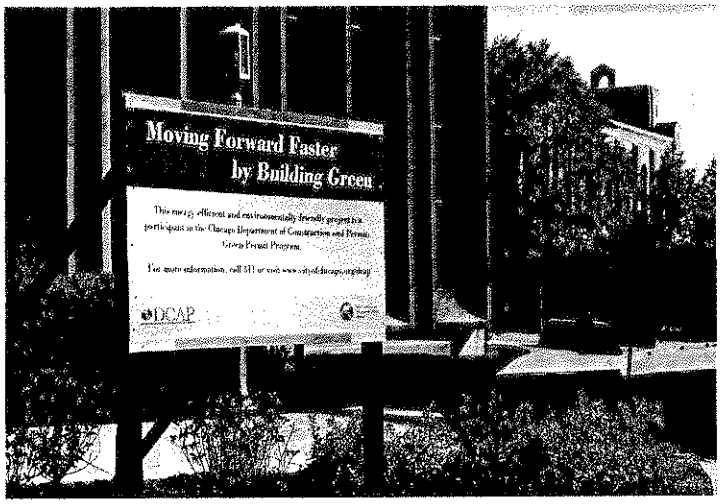
Nudging the forces of the market to embrace new ways of considering how the construction of buildings affects the world we live in is no easy task. Ultimately, developing the means to a more sustainable future will require the cooperation of the best of both the governmental and private sectors. ◆

***Peter Bruck, LEED AP**, is the Building Official for the City of Rohnert Park, California. His Master's paper on the development of Rohnert Park's Green Building Ordinance is available on the city's website at* www.rpcity.org/content/view/567/183.

For more information about Rohnert Park's Green Building Ordinance, including a link to the document itself, go to www.rpcity.org/content/view/468/183.

Fourteen Points to Consider when Developing a Green Building Program or Ordinance

1. Understand and assess the direction desired by the local council or board. Without strong political backing, gaining support for funding, staffing and other resources will prove more difficult.
2. Consider the pros and cons of a mandatory versus voluntary program and choose the one most appropriate for the jurisdiction. Consider the use of development agreements as an option to introduce green building features into the local process one step at a time.
3. Research local cities' and counties' green programs and ordinances for possible use as models.
4. Consider taking a "working group" approach consisting of a balanced mix of stakeholders including elected officials, governmental staff members, developers and builders, and the public at large.
5. Work with the Planning Commission and use its meetings as a platform for workshops and public participation.
6. Conduct a "sustainability workshop" to illustrate how green building is connected to a host of related issues and help garner support from special interest groups.
7. Select green building guidelines or standards that are appropriate for your jurisdiction and, when possible, are already used in your region.
8. Consult with legal counsel to ensure that proposed guidelines or standards do not conflict with other state or local regulations. In the case of an ordinance, be sure that it is legally defensible.
9. Consider the use of outside resources for green building plan check and inspection.
10. Keep compliance thresholds realistic and try not to address them until the end of the development process.
11. Keep the "triple-bottom line"—environment, economy and social equity—in mind to ensure a sense of fairness for all parties.
12. Determine how the program or ordinance will be staffed and funded.
13. Select a staff member to champion the development process.
14. Provide education about green building principles and your jurisdiction's program or ordinance to staff members, developers, builders and residents.



Chicago Green Permit Program signage for Loyola University's new Information Commons.

The City of Chicago Green Permit Program

by Erik L. Olsen, P.E., LEED AP

Growing interest in sustainability has resulted in numerous public policy initiatives across the U.S. encouraging, requiring or seeking to enhance the capacity for green building. Although there are some state and federal programs, most such efforts are occurring at the municipal level.

It is difficult to find a major jurisdiction today that does not require its own public projects to be built green, typically meaning LEED (Leadership in Energy and Environmental Design) certified. Others, like Arlington, Virginia, also offer incentives such as floor area ratio bonuses or, as with the Austin, Texas, Green Building Program, technical assistance for private construction projects. Some municipalities, like Boston, Massachusetts, and Washington, D.C., have even experimented with green requirements for private buildings.

Expedited permitting programs, although frequently mentioned as an incentive worth consideration, currently have few full-scale implementations. The City of Chicago, Illinois, provides an excellent example of the successful implementation of such a program. Introduced in 2005, the Chicago Department of Construction and Permits Green Permit Program is the first of its kind in a large U.S. jurisdiction, and its success—from 19 permits in 2005 to 71 in 2006 and a goal of over 100 this year—has helped significantly accelerate the growth of private-sector green building in the city. Today, Chicago leads the nation in number of LEED registered projects.

Developer Benefits

Chicago's Green Permit Program offers two main incentives. First, permits for large or complex projects can be issued in as little as six weeks from the time of construction document submission—approximately half the typical time. This time savings can translate into substantial financial benefit for developers because earlier construction starts mean earlier sales or leasing and reduced interest on construction loans.

The program also offers a more direct financial incentive in the form of reduced fees. Developers of larger projects typically pay additional fees for the services of city plan review consultants, and up to $25,000 of these fees are waived for projects that qualify for Chicago's Green Permit Program. Whereas expedited permitting is mostly of interest to for-profit developers, the reduction of fees associated with permitting can be a major benefit to nonprofit and affordable housing developers. Even $50,000 is a nearly invisible line item in a $100 million development, but $15,000 or $20,000 is a substantial contribution to the bottom line of a proposed $10 million affordable housing project with 10 different funders.

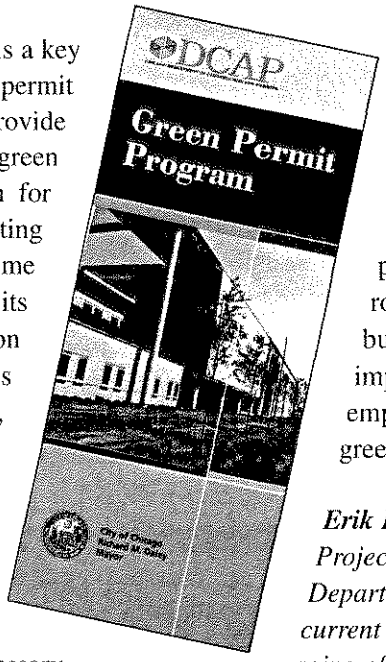
Rationale

Expedited permitting is likely to be of greatest value in large, dense cities. Moving green projects to the front of the plan review queue may expedite permitting in some jurisdictions, but in Chicago most would still be at risk of delays because of the complexity of the permitting process.

To help developers navigate this complexity, projects that qualify for Chicago's Green Permit Program receive a much higher level of customer service than typical large developments. The number of projects in the program at any one time is deliberately controlled through the adjustment of program criteria in order to ensure a single point of contact. This is critical to maintaining involvement with projects early on and throughout the design process in order to identify potential permitting problems and solve them in advance.

This approach surprises both new customers and visitors from other jurisdictions, distinguishes Chicago's approach

from green building programs elsewhere, and is a key to the program's success. Green assistance and permit assistance are fully integrated, so rather than provide an outside advisory group specific only to green strategies, one individual is responsible both for ensuring a project's sustainability and coordinating its regulatory process. Only 10 percent of the time spent on a typical project involves evaluating its green elements. The remainder is spent on typical permit management concerns such as developing and maintaining project schedules, coordinating with related city departments, and providing code interpretations.



If a project is identified as a Green Permit Program participant, all City of Chicago departments are expected to provide priority service. Nonetheless, any required legal review periods must be maintained and necessary legislative approvals obtained. Such potential concerns emphatically underscore the need for early coordination. After all, designing a green building is not worth much if final approval cannot be gained.

Additional Considerations

A benefit of any such program is risk reduction. Project teams are often reluctant to consider the use of alternative building products or systems for fear of rejection during the permitting process. Providing dedicated assistance for green projects turns this attitude on its head: "If you're trying something different, we'll work with you to try to approve it as quickly as possible while still following all appropriate protocols."

On the downside, jurisdictions considering a permit-based green building incentive program must be cautious of "greenwashing": attempts to promote projects with questionable environmental value. That is why Chicago's Green Permit Program has published qualifying criteria that include LEED certification for commercial and large residential projects and Chicago Green Homes certification (provided by the Chicago Department of Environment) for small residential projects. In addition, a pre-permit review is required to ensure that prospective projects meet program requirements, and free technical assistance is provided to help meet designers meet their sustainability goals.

Conclusion

Although Chicago's Green Permit Program has been remarkably successful over its short history, there remains room for enhancement. For example, additional incentives—such as the partial waiver of basic permitting fees—may be necessary to draw in more small projects like the installation of solar thermal panels on single-family residences, and providing prototypical plans or system diagrams may serve to encourage such projects.

By the same account, Chicago is beginning to see a troubling increase in "greenwashing," with more and more products and systems with no clear environmental value being marketed to homebuyers. This troubling trend poses an important public education challenge and emphasizes the importance of third-party green building certifications. ◆

Erik L. Olsen, P.E., LEED AP, is Green Projects Administrator for the City of Chicago Department of Construction and Permits. His current projects for the department include managing of its Green Permit Program, developing a green building code and piloting an electronic plan review process.

Olsen is also a member of the U.S. Green Building Council's Greening the Codes Committee and writes and edits "GreenBean" (http://greenbean.typepad.com)*, a blog dedicated to reporting on built, in-progress and unbuilt green buildings in Chicago.*

Personal Footprint

Attached are 3 samples of on-line footprints:

- http://www.ecologicalfootprint.org
- http://www.thegreenoffice.com
- http://www.kidsfootprint.org

Suggestions for use:

- Add to City's sustainability web site
- Include with City newspaper
- Use in outreach activities
  - Endangered species faire
  - Earth month activities
- Collect informal date base with Chico scores
- Ask schools to participate

ecologicalfootprint.org

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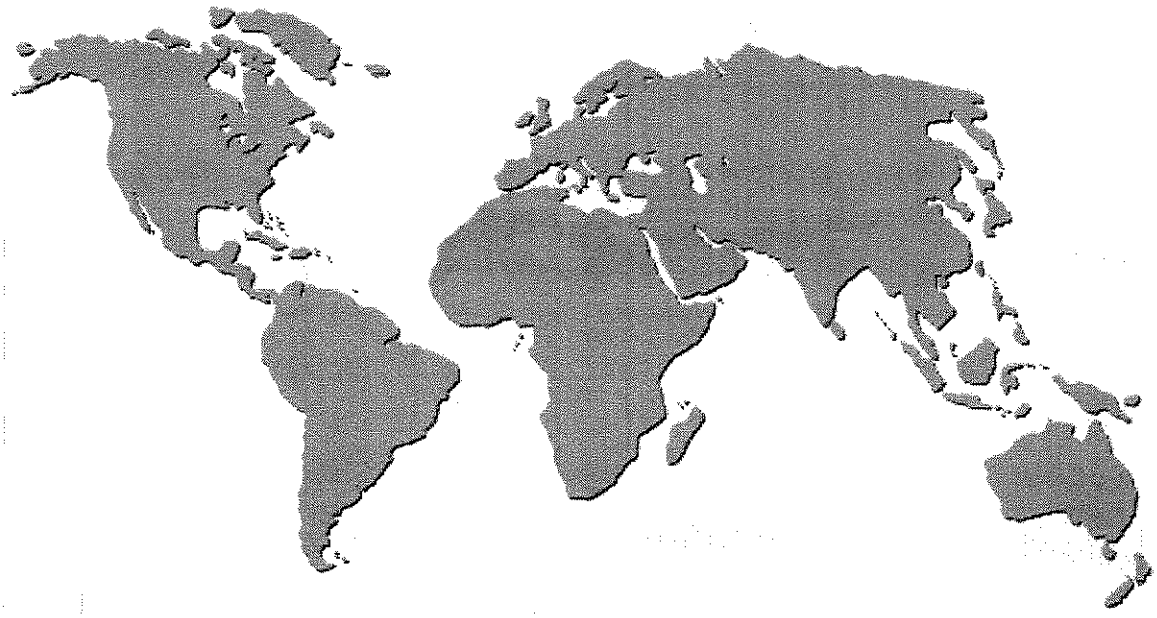
Ecological Footprint Quiz

Willkommen! Wählen Sie das Land wo Sie wohnen.



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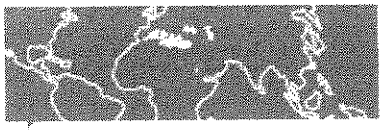

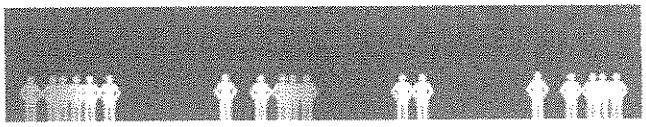

let's start

How old are you?
36-50

How big is the city, town, or place where you live?
100,001 - 1,000,000

What city has the most similar weather to yours?
Seattle

Choose one:
Female

Please enter your zip code. (Optional)
95926

Email Address. (Optional)

ecological footprint

QUIZ

Ever wondered how much "nature" your lifestyle requires? You're about to find out.

This Ecological Footprint Quiz estimates how much productive land and water you need to support what you use and what you discard. After answering 15 easy questions you'll be able to compare your Ecological Footprint to what other people use and to what is available on this planet.

CAUTION: THIS QUIZ MAY SURPRISE YOU, SHOCK YOU, OR MAKE YOU THINK. PLEASE REMAIN CALM...BUT NOT TOO CALM!!

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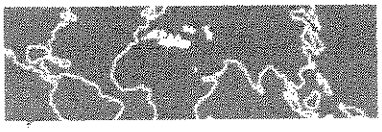

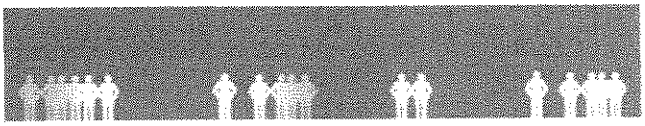

ecological footprint
QUIZ

Food Footprint

1. How often do you eat animal based products? (beef, pork, chicken, fish, eggs, dairy products)

- ○ Never (vegan)
- ○ Infrequently (no meat, and eggs/dairy a few times a week) (strict vegetarian)
- ○ Occasionally (no meat or occasional meat, but eggs/dairy almost daily)
- ○ Often (meat once or twice a week)
- ◉ Very often (meat daily)
- ○ Almost always (meat and eggs/dairy in almost every meal)

2. How much of the food that you eat is processed, packaged and not locally grown (from more than 200 miles away)?

- ○ Most of the food I eat is processed, packaged, and from far away
- ○ Three quarters
- ◉ Half
- ○ One quarter
- ○ Very little. Most of the food I eat is unprocessed, unpackaged and locally grown.

Goods Footprint

3. Compared to people in your neighborhood, how much waste do you generate?

- ◉ Much less
- ○ About the same
- ○ Much more

Shelter Footprint

4. How many people live in your household?

- ◉ 1 person
- ○ 2 people
- ○ 3 people
- ○ 4 people
- ○ 5 people
- ○ 6 people
- ○ 7 or more people

5. What is the size of your home?

- ○ 2500 square feet or larger
- ○ 1900-2500 square feet
- ○ 1500-1900 square feet
- ○ 1000 -1500 square feet
- ◉ 500-1000 square feet
- ○ 500 square feet or smaller

6. Which housing type best describes your home?

- ○ Free standing house without running water
- ○ Free standing house with running water
- ◉ Multi-story apartment building
- ○ Row house or building with 2-4 housing units
- ○ Green-design residence

7. Do you have electricity in your home?

- ○ No
- ◉ Yes
- ○ Yes, with energy conservation and efficiency

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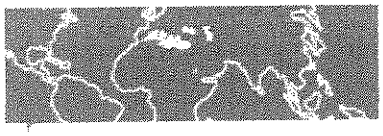

ecological footprint QUIZ

Mobility Footprint

8. On average, how far do you travel on public transportation each week (bus, train, subway or ferry) ?

- ○ 200 miles or more
- ○ 75-200 miles
- ○ 25-75 miles
- ○ 1-25 miles
- ◉ 0 miles

9. On average, how far do you go by motorbike each week (as a driver or passenger)?

- ○ 200 miles or more
- ○ 75-200 miles
- ○ 25-75 miles
- ○ 1-25 miles
- ◉ 0 miles

10. On average, how far do you go by car each week (as a driver or passenger)?

- ○ 400 miles or more
- ○ 300-400 miles
- ○ 200-300 miles
- ○ 100-200 miles
- ◉ 10-100 miles
- ○ 0 miles

11. Do you bicycle, walk, or use animal power to get around?

- ◉ Most of the time
- ○ Sometimes
- ○ Seldom

12. Approximately how many hours do you spend flying each year?

- ○ 100 hours
- ◉ 25 hours
- ○ 10 hours
- ○ 3 hours
- ○ Never fly

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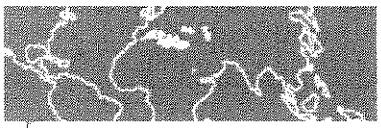

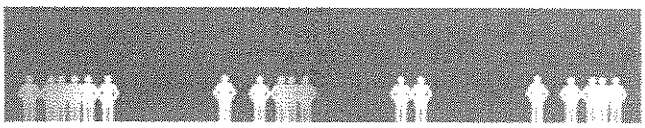

ecological footprint QUIZ

13. How many miles per gallon does your car get? (If you do not own a car, estimate the average fuel efficiency of the cars you ride in.)

- ○ More than 50 miles per gallon
- ○ 35-50 miles per gallon
- ◉ 25-35 miles per gallon
- ○ 15-25 miles per gallon
- ○ Fewer than 15 miles per gallon

14. How often do you drive in a car with someone else, rather than alone?

- ○ Almost never
- ○ Occasionally (about 25%)
- ○ Often (about 50%)
- ◉ Very often (about 75%)
- ○ Almost always

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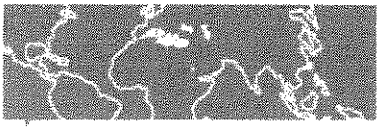

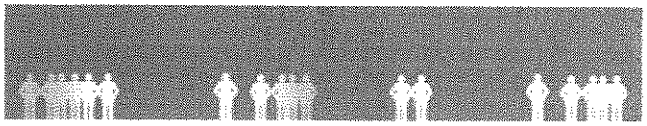

quiz results

bookmark this page

CATEGORY	ACRES
FOOD	4.9
MOBILITY	1.7
SHELTER	6.9
GOODS/SERVICES	5.9
TOTAL FOOTPRINT	**19**

IN COMPARISON, THE AVERAGE ECOLOGICAL FOOTPRINT IN YOUR COUNTRY IS 24 ACRES PER PERSON.

WORLDWIDE, THERE EXIST 4.5 BIOLOGICALLY PRODUCTIVE ACRES PER PERSON.

IF EVERYONE LIVED LIKE YOU, WE WOULD NEED 4.4 PLANETS.

TAKE ACTION!

DONATE

ecological footprint QUIZ

ECOLOGICAL FOOTPRINT CAMPAIGN

- Join the Campaign!
- Who are We?
- About the Footprint Quiz
- Support the EF Quiz

EMAIL

- Email a Friend
- Email Results to Yourself

WHAT YOU CAN DO

- Individuals
- Community Members and City Officials
- Businesses
- Nation
- Schools and Campuses

COMMENTS AND QUESTIONS

- Comment on the Footprint Quiz
- Frequently Asked Questions (FAQ)
- What about other Species?
- What about Population?

RESET

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TheGreenOffice.com Carbon Offsetting service measures environmental sustainability & allows users to buy emission reduction & renewable energy credits that neutralize climate changing greenhouse gases & mitigate global warming

Powered By:

OFFICE FOOTPRINT CALCULATOR™

learn more

OUR CALCULATOR

The Office Footprint Calculator™ was developed as a joint project of TheGreenOffice.com and Redefining Progress, an internationally recognized pioneer in the development of sustainability indicators. The self assessment tool aims to promote sustainability in the workplace by increasing awareness of the issues and providing easy, cost effective resources for improvement.

Quick Links

What is a footprint?
How is my footprint measured?
History of Our Calculator
Assumptions & Methodology
Data Sources
Use of Calculator
Limitations
About Redefining Progress

What is a footprint?

Your footprint represents the net impact of all the things bought, sold, and left behind in the course of daily work. Whether you are a consultant working from home, a small non-profit laboring for the greater good, or a large corporation with facilities worldwide, the unfortunate fact is that virtually all of our actions contribute in some way to ecological deterioration and climate change. The reasons for this are many. Resources are consumed faster then they regenerate; ecosystems are being polluted by toxic runoff; and the burning of fossil fuels is flooding our atmosphere with CO2. The good news is that there are a growing number of practical and affordable solutions readily available for those looking to take responsibility for diminishing their impact. To learn more about the office greening products and services offered by TheGreenOffice.com, click here.

Calculate Footprint Now

How is my Footprint measured?

Your Footprint is measured in a unit called a "global acre," which is an acre of land with average global biological productivity. Expressing the footprint in global acres allows comparison across different regions with varying land uses. Additionally, the use of global acres allows us to determine if you are operating at, above, or below the average capacity of Earth to renew resources and absorb waste. Based on your answers, we also determine the annual carbon dioxide emissions associated with your workplace. Carbon emissions are expressed in metric tons per year. The best way to diminish your Footprint is through resource conservation, green purchasing, and carbon offsetting. On the results page of the calculator you will find easy and cost-effective resources for implementing each of these critical strategies.

History of Our Calculator

The basis for our Office Footprint Calculator™ began in 1996 when Dr. Willam Reese and Dr. Mathis Wackernagel, based at the University of British Columbia, developed the first footprint assessment and published the results in *Our Ecological Footprint*. In 2000, Dr. Wackernagel assembled a team at Redefining Progress to further refine the footprint methodology. After these improvements, the team began widely disseminating their findings through both Refining Progress and the World Wildlife Federation. Beginning in 2004, Redefining Progress made a second round of refinements under the direction of Dr. Jason Venetoulis and Dr. John Talberth. Two years later a Footprint 2.0 was completed. At the end of 2005, a team from TheGreenOffice.com began working with Redefining Progress to develop a calculator tailored to capture and analyze the resource consumption of offices.

Assumptions & Methodology

Footprint calculations are based on five assumptions:

> It is possible to keep track of most of the resources people consume and many of the wastes offices generate.
>
> Most of these resource and waste flows can be converted into the biologically productive area that is required to maintain these flows.
>
> These different areas can be expressed in the same unit (global acres) once they are scaled proportionally to their biomass productivity. In other words, each particular acre can be translated to an equivalent area of world-average land productivity.
>
> Since these areas stand for mutually exclusive uses, and each standardized acre

represents the same amount of biomass productivity, they can be added up to a total.

This area for demand can be compared with nature's supply of ecological services (including carbon absorption), since it is also possible to assess the area on the planet that is biologically productive.

Building from these assumptions, the sequential procedures used to estimate Footprints are:

1. Identify the world's biocapacity, i.e. how many hectares (or acres) of crop land are dedicated to bean production. This also includes pasture land, forests, fishing area, carbon sequestration area, and built space.
2. Normalize all biocapacity categories using the equivalence factors into global acres, i.e. making crop land, grasslands, and forest comparable using a common denominator such as net primary productivity or agricultural potential.
3. Subtract biocapacity for the needs of non-human life.
4. Determine the average yield factors for a hectare of biocapacity, i.e. how many tons of beans per hectare of crop land are produced.
5. Use the biocapacity and yield factors to measure the area of biocapacity an office's consumption and waste output requires over the course of a year, i.e. one ton of beans might require ½ hectare to grow in a particular country, and thus the footprint of two tons of bean consumption is one global hectare.
6. Once the footprint has been calculated in terms of global acres, the associated carbon liability for that footprint is determined using a carbon dioxide absorption factor.

Data Sources

The Office Footprint Calculator™ is primarily based on data published by United Nations agencies and the Intergovernmental Panel on Climate Change. Averages for US office resource consumption are derived using datasets provided by the US Department of Transportation, US Department of Energy, Lawrence Berkeley Laboratory, Oak Ridge National Laboratory, and other industry groups such as Special Coffee Association of America.

Use of the Calculator

Footprint and carbon liability assessments are only as good as the data used to calculate them. For this reason, it is imperative that users gather information in an accurate and precise manner.

Use of averages
For each question within the Office Footprint Calculator™, we provide U.S. national averages to aid users while answering the questions. While we recommend using exact figures, the averages are provided for guidance or when a piece of information simply cannot be found.

Onsite data collection
For larger organizations, managing and coordinating data collection with employees and building managers can be a fairly involved task. TheGreenOffice.com has tools available to help organizations conduct their internal surveys. For assistance with data collection, whether you are a large or small organization, please do not hesitate to email or call at 800.909.9750.

Limitations

While the Office Footprint Calculator™ provides clear, intuitive measures of two important indicators of sustainability, it does not capture every environmental strain that also systematically undermines sustainability and carrying capacity.

Consider the following example. Footprinting ignores the effects of toxic pollution on organisms and processes that sustain Earth's life support systems. For example pollinator populations like bats and bees are disproportionately impaired by toxic pollution from pesticide applications, undermining biological productivity. The inability to capture problems of cumulative environmental contamination is particularly problematic from an energy perspective.

As explained by Venetoulis and Talberth, "while such declines may be reflected in lost biocapacity in the future, they are not reflected in negative ecological balances in the present." Thus, ironically, while ecological footprints are used as indicators of sustainability, they fail to capture the systematic erosion of earth's carrying capacity that is the basis of sustainability.

Finally, experience has demonstrated that we cannot predict all important sustainability impacts of human resource use. Examples include the unanticipated destruction of Earth's protective ozone layer by chlorofluorocarbons and other chemicals. Ozone loss was well on its way to undermining life on Earth before the problem was discovered and addressed. Another example is the unanticipated endocrine disrupting effects of many chemicals now in widespread commercial use that are impairing reproduction of wildlife populations. Emerging new technologies whose sustainability implications are largely unknown but potentially serious include widespread use of genetically engineered crops, new introductions of genetically engineered livestock and other organisms, and just emerging products of nanotechnology.

Therefore the current Office Footprint Calculator™ represents our current best understanding of the intricate balance and interactions of the Earth's various geological and ecological systems. As technologies improve with regards to their environmental impact, so too will our tools for more accurately assessing those impacts. The current degree of accuracy of our calculations is the best in the industry and will only get better. We invite you to learn how you impact the world as we understand it today.

About Redefining Progress

Redefining Progress (RP) works with a broad array of partners to shift the economy and public policy towards sustainability. RP does this in three ways:

RP measures the real state of our economy, our environment, and social justice with tools like the Genuine Progress Indicator and the Ecological Footprint.

RP designs policies - like environmental tax reform - to shift behavior in these three domains (economy, environment, and equity) towards sustainability.

RP promotes and creates new frameworks - like common assets - to replace the ones that are taking us away from long-term social, economic, and environmental health.

RP's tools include rigorous indices of sustainability, groundbreaking economic policies, and solid new frameworks for re-shaping our world. RP's partners include grassroots communities, labor unions, policymakers, academics, and businesses. RP's efforts are largely focused on the United States because redefining progress here will have enormous global reverberations.

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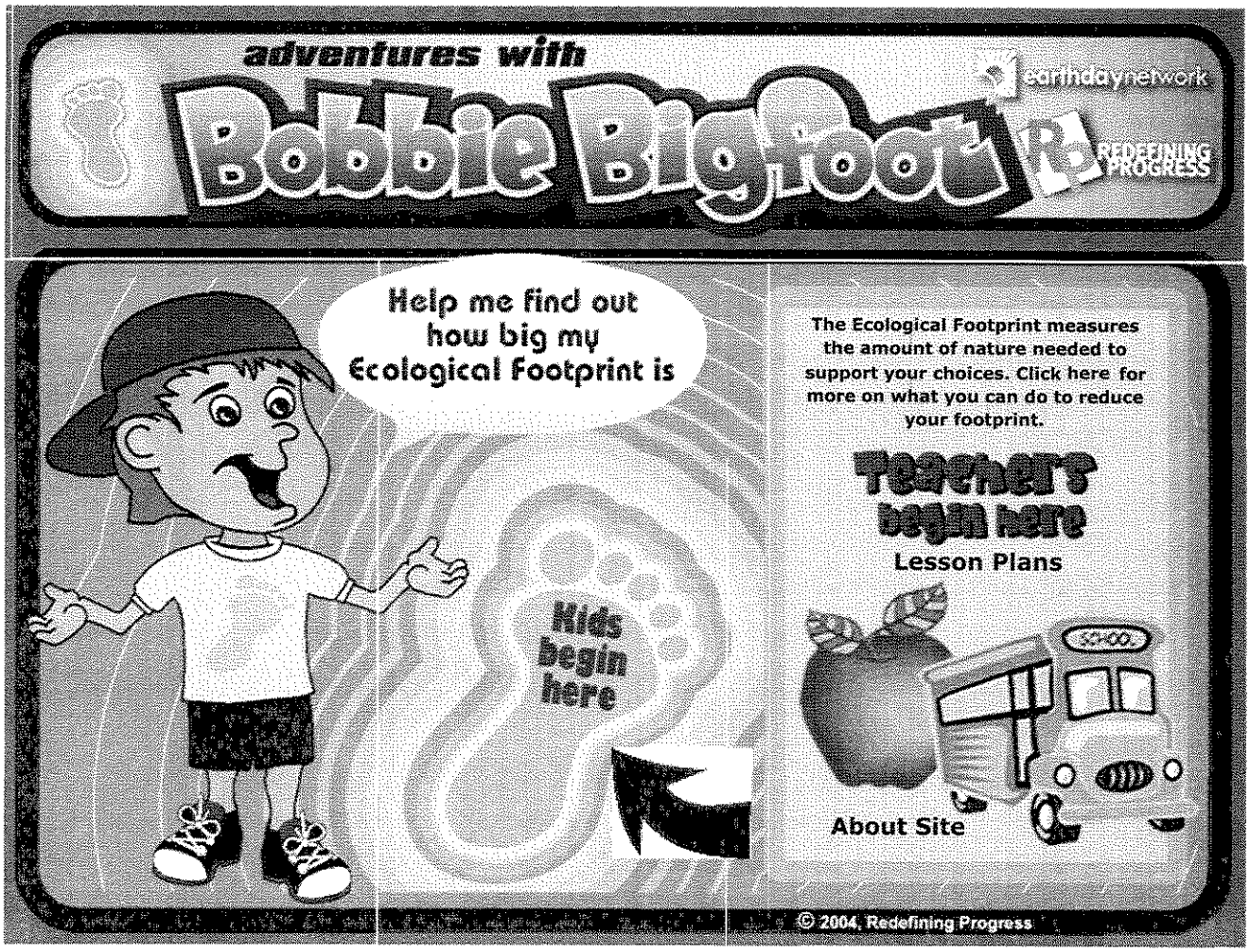
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Help me find out how big my Ecological Footprint is
Kids begin here
The Ecological Footprint measures the amount of nature needed to support your choices. Click here for more on what you can do to reduce your footprint.
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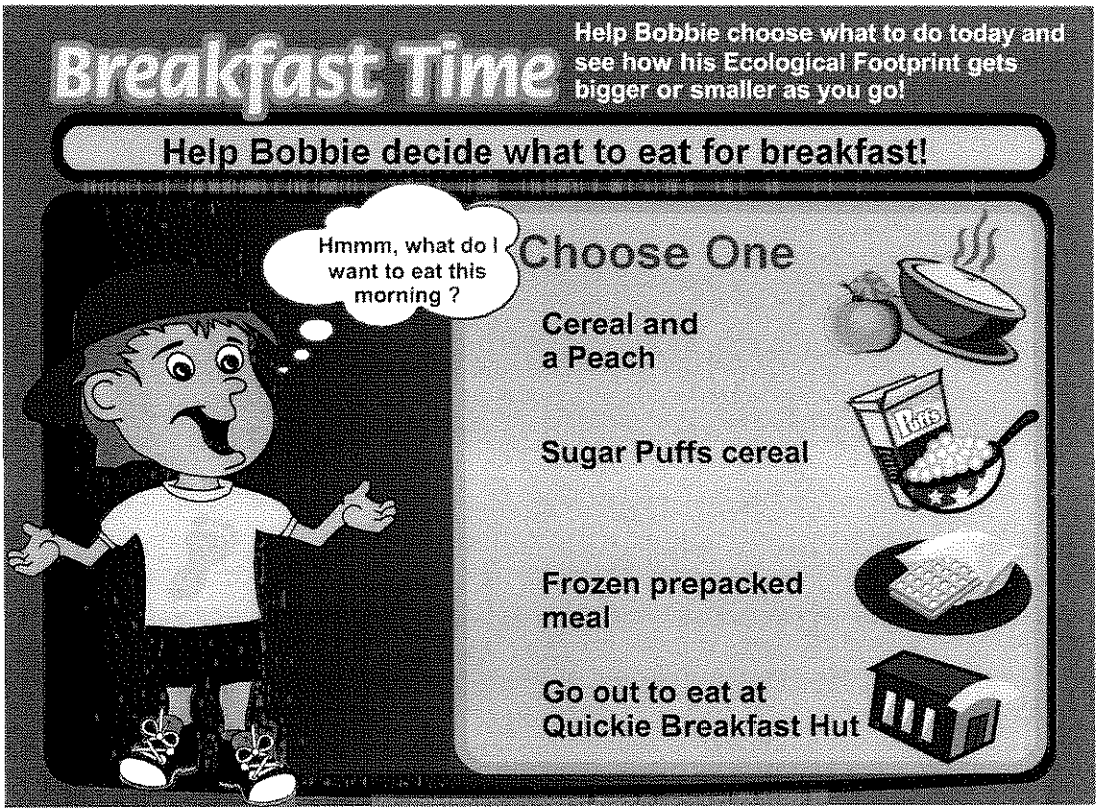
Breakfast Time
Help Bobbie choose what to do today and see how his Ecological Footprint gets bigger or smaller as you go!
Help Bobbie decide what to eat for breakfast!
Hmmm, what do I want to eat this morning ?
Choose One
Cereal and a Peach
Sugar Puffs cereal
Puffs
Frozen prepacked meal
Go out to eat at Quickie Breakfast Hut