



Harvard Green Campus Initiative Overview

April 11, 2006

Jaclyn Emig
Longwood Green Campus Initiative Program Coordinator

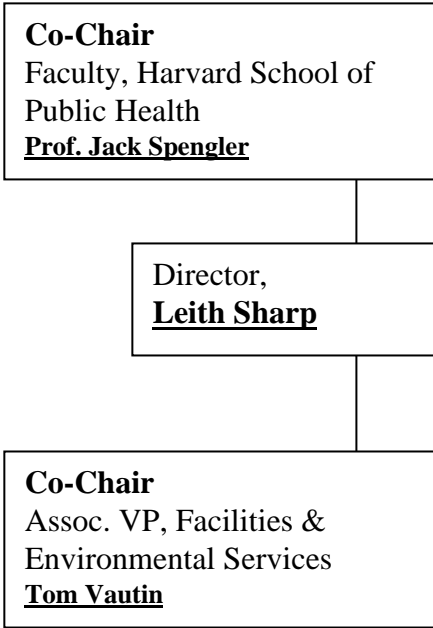


Agenda

- Introduction
- Intro to Harvard Green Campus Initiative
- Large Scale Behavior Change Programs
- Case Studies
 - “Shut the Sash” Campaign in Labs
 - Sustainability Pledge Campaign
 - Green Living Programs



Harvard Green Campus Initiative: Organizational Chart 2000



2006

February

Co-Chair

Faculty, Harvard
School of Public
Health
Prof. Jack Spengler

Director, Harvard
Green Campus
Initiative
Leith Sharp

Co-Chair

Assoc. VP, Facilities
& Environmental
Services
Tom Vautin

Operating Cost = \$1,000,000 pa.
Annual Savings = \$3 million
& over 40 million pounds of CO₂

➤ 18% Funded through Office of
President and Provost

➤ 82% Funded through fee for
service partnerships

HGCI Core Staff

Manager, Communications, Finance & Admin.
Maggie Husak

Webmaster **Sheldon Schwartz**

Special Projects Assistant **Gosia Sklodowska**

Green Laboratory Programs

Longwood Campus Energy Reduction Program.
Jaelyn Emig

FAS Campus Energy Reduction Program
Maura Leahy

Residential Green Living Programs

Manager, Undergraduate Green Living Program
Allison Rogers

Manager, Graduate Green Living Program
Meryl Brott

38 part-time student employees

High Performance Building Service

Manager, High Performance Building Service
Michael Crowley

HPBS, Program Coordinator **Nathan Gauthier**

HPBS, Research Assistant **Andrea Ruedy**

HPBS, Project Assistant **Jesse Foote**

HGCI Course at Harvard
Extension School:
**Sustainability – The
Challenge of Changing Our
Institutions**
Offered by Distance & Classroom

Clients and Partners:

**Harvard Medical School,
School of Public Health &
Dental School**

Faculty of Arts & Sciences

Harvard Law School

Harvard Business School

Harvard School of Education

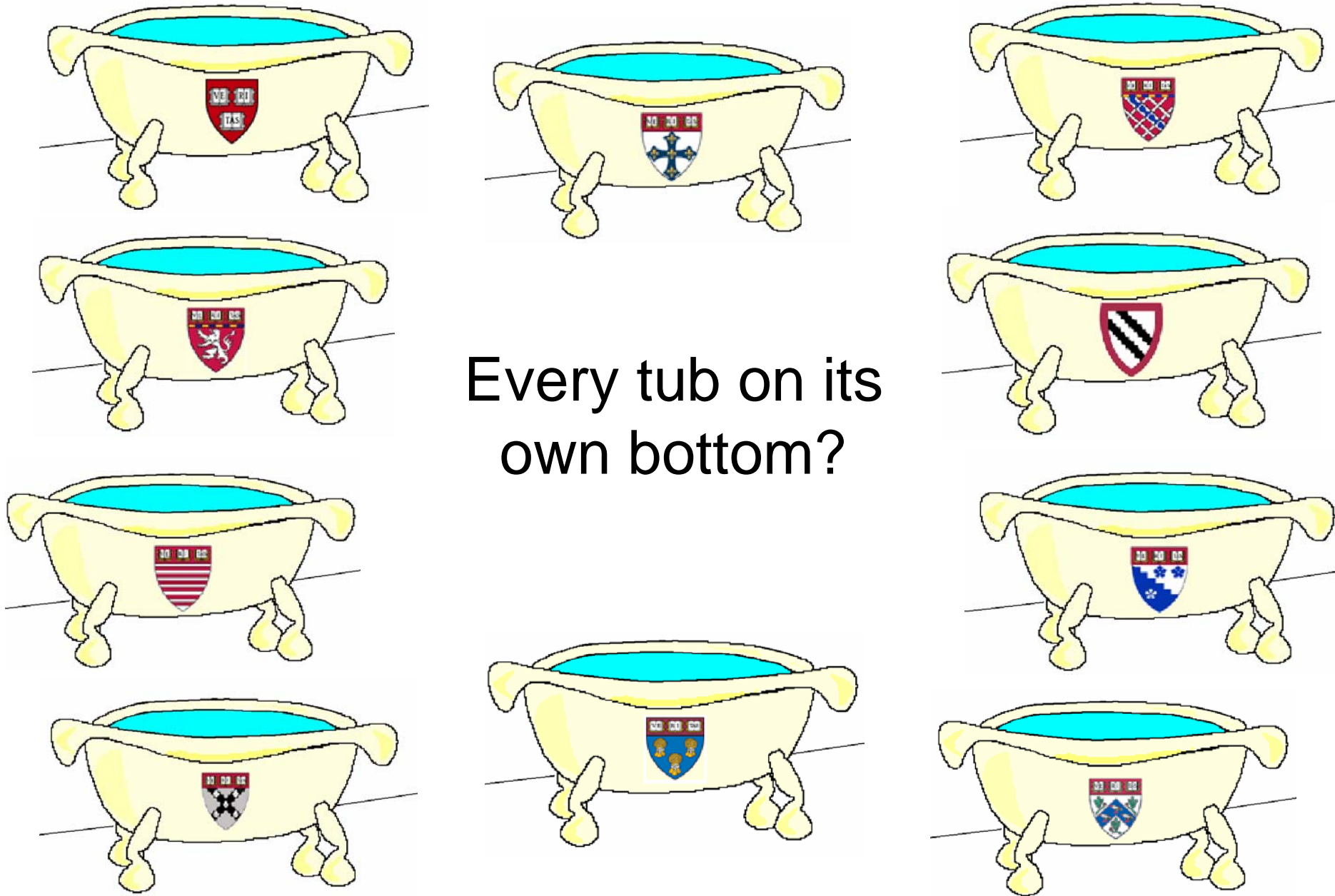
Harvard Real Estate Services

University Dining Services

**University Operations
Services**

Allston Development Group

Harvard's Decentralized Nature



Green Campus Programs

Existing Buildings

- Conservation Projects
- Green Loan Fund
- Peer to Peer Training Programs

New Construction & Renovation

Occupant Behavior Change

- Labs
- Green Living Programs
- Large Scale Behavior Change

Greenhouse Gas Inventory

Renewable Energy

Training and Education

HGCI high performance building services

Building Assessments

- Building management profiles
- Building performance analyses
- Identification of efficiency project
- Analysis of rebates & loan fund
- Behavioral change opportunities

Peer to Peer Training

- Lighting
- HVAC
- Commissioning
- Water Conservation/Efficiency
- Procurement
- Building Envelope

LEED Project Management

- Design Charrette Facilitation
- LEED Administration
- Research Support

Current LEED Projects

- 3 Certified Projects
- 8 Registered Projects

LEED Projects

3 LEED Certified Projects

- 1 Western Avenue (Silver Rating, New Construction,
- Landmark Center (Certified Rating, Commercial Interiors, Pilot Project)
- Schlessinger Library

8 LEED Registered Projects

- Blackstone Redevelopment
- 90 Mt. Auburn Street
- Hamilton Hall
- Dunster/ Mather House Dining Halls
- 888 Memorial Drive
- Banks, Cowperwaithe, Grant Street
- 60 Oxford Street

Green Campus Loan Fund

Overview

- \$3 million interest-free revolving loan fund
- Available to Harvard Schools and Departments
- A financial incentive for energy, water & resource optimization
- Funded through the offices of the University President and Provost
- Eligible projects: *5-year payback* Feasibility Studies * Photovoltaics

36 month Performance

- Over \$3 million invested in 41 projects
- ROI = 32.6%
- Annual GHG Reduction = 2% of 2001 emissions
 - 16,424,453 lbs of CO₂
 - 7,278,498 gallons of water
 - 200,000 lbs of waste diverted

Sustainability Principles

The Harvard Principles of Sustainability for Campus Planning and Operations

““Operating our campus in an environmentally sustainable way is not only the right thing to do as a citizen and neighbor, it is also an economically sound way to conduct our business. As we plan for the future, these principles will set a strong course that will benefit Harvard and promote responsible growth and environmental quality in our community.”

President Lawrence H. Summers, Harvard University



Large Scale Behavior Change Programs



Individual Impacts

According to the EPA Individuals can affect
32% of personal ghg emissions through
electricity use, waste, and transportation choices!



Small Actions Add Up

- If all **8,000 computers** on the Longwood campus are left on all the time we spend **\$260,000 per year** in wasted electricity.
- For **every degree** you turn down the temp on your thermostat you can save **2-3%** of your heating costs (energystar.gov)



Our Campaigns

Our Goals

- Change behaviors
- Build life-long habits and understanding
- Raise environmental awareness
- Build a culture of sustainability
- Get people involved and inspired





Our Campaigns

What goes into campaigns?

Partnerships and Relationships

- Human Resources
- Information Tech
- Student Affairs,
- Residential Assists.
- Dept Heads,
- Operations Staff
- Administrators
- Building Managers
- Staff
- Students

Find the champions



Our Campaigns

What goes into campaigns?

Knowledge of the Organization

- Existing communication venues
- Decision-makers
- Organizational Culture
- Building Operations



Our Campaigns

What goes into campaigns?

Environmental Expertise

- Understand the issues
- Research project ideas, environmental impacts and benefits



Our Campaigns

What goes into campaigns?

Creativity and Enthusiasm

Harvard Longwood Campus
Green Tip of the Month
September 2005

 **Back To School**
Campus Greening!

The start of a new school year is a great time to make a fresh commitment to reducing your own environmental impacts & reducing energy use & waste on campus

- ✓ **Shut off** or your computer monitor & office equipment every night
- ✓ **Unplug unused equipment** even when it is off it still uses electricity
- ✓ **Recycle** paper and cans & bottles
- ✓ **Re-use file folders** when cleaning out and recycling old files
- ✓ **Visit the GREEN CAMPUS** website www.greenCampus.harvard.edu



Our Campaigns

What goes into campaigns?

- Partnerships and Relationships
- Knowledge of the Organization
- Information and Expertise
- Creativity and Enthusiasm
- Social Marketing Tools
- Communication Skills



Community-Based Social Marketing (CBSM)

Source:



Community-Based Social Marketing

Community-Based Social Marketing (CBSM)

Fostering Sustainable Behavior

by Doug McKenzie-Mohr and William Smith

**Social Sciences research shows that
INFORMATION alone is not always
enough to influence BEHAVIOR**



Community-Based Social Marketing

Key Steps

Step 1: ID Barriers & Benefits

Step 2: Develop Program using Proven Tools

Step 3: Run a Pilot, Evaluate

Step 4: Implement

Step 5: Continuously Monitor and Adapt

Source: *Fostering Sustainable Behavior* by Doug McKenzie-Mohr and William Smith



Community-Based Social Marketing

Key Steps

Step 1: ID Barriers & Benefits

Step 2: Use Proven Tools

Step 3: Run a Pilot and Evaluate

Step 4: Implement

Step 5: Continuously Monitor & Adapt

make it
convenient!

- Internal & external
- Research
- Focus Groups
- Surveys
- Stakeholders



Community-Based Social Marketing

Key Steps

Step 1: ID Barriers & Benefits

Step 2: Use Proven Tools

Step 3: Run a Pilot and Evaluate

Step 4: Implement

Step 5: Continuously Monitor & Adapt

- Commitment
- Prompts
- Norms
- Communication
- Incentives

Source: *Fostering Sustainable Behavior* by Doug McKenzie-Mohr and William Smith



Community-Based Social Marketing

Key Steps

Step 1: ID Barriers & Benefits

Step 2: Use Proven Tools

Step 3: Run a Pilot & Evaluate

Step 4: Implement

Step 5: Continuously Monitor & Adapt

- Test your strategies
- Measure results with quantitative data
- Evaluate and adjust

Source: *Fostering Sustainable Behavior* by Doug McKenzie-Mohr and William Smith



Community-Based Social Marketing

Key Steps

Step 1: ID barriers & benefits

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Source: *Fostering Sustainable Behavior* by Doug McKenzie-Mohr and William Smith



Community-Based Social Marketing

Key Steps

Step 1: ID Barriers & Benefits

Step 2: Use Proven Tools

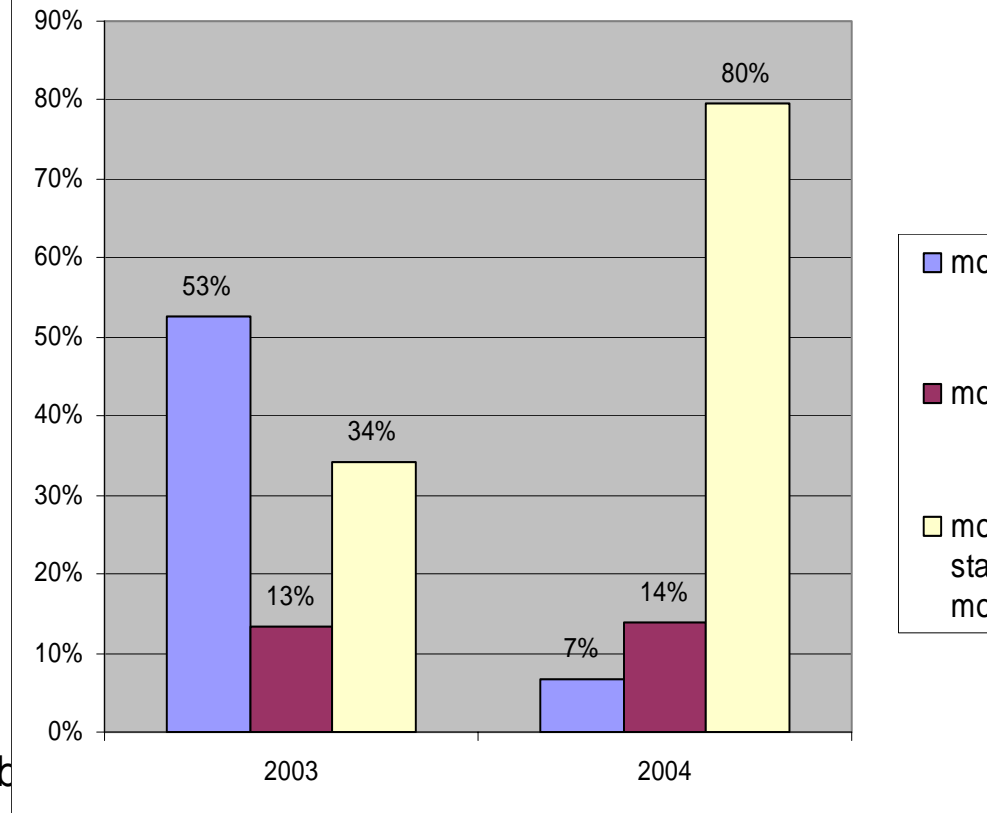
Step 3: Run a Pilot & Evaluate

Step 4: Implement

Step 5: Continuously monitor & adapt

Source: *Fostering Sustainable Behavior*

Comparing Computer Monitor Use 03/04:
What Percentage of People Turn Them Off? Leave Them Use Sleep Software?





Tools for Behavior Change

Step 2: Use Proven Tools

- Commitment
- Prompts
- Norms
- Communication Strategies
- Incentives



Tools of Behavior Change

Commitment

- Alters self-perception
- Consistency

TIPS:

- written
- make it public
- actively involve people
- group commitments





Tools of Behavior Change

Prompts

Reminder to trigger behavior

TIPS:

- Close to the point of action
- Eye catching and noticeable
- Clear instruction





Tools of Behavior Change

Norms

- People want to be seen doing the right thing
- Strong social pressures

TIPS

- Visible to the community
- Personal, Community oriented
- Encourage positive behavior



Tools of Behavior Change

Incentives

Motivation

TIPS:

- Make it visible
- Consider
 - non-monetary (recognition, competition)
- Closely pair the incentive and the behavior



emPOWER harvard

take the campus sustainability pledge

pledge online at <http://www.greencampus.harvard.edu/pledge>

Win Renewable Energy for your building!

Show your support for a sustainable Harvard campus, and pledge to take action to reduce your own energy use!

Sign the pledge online at www.greencampus.harvard.edu/pledge by **November 23** and choose 3 actions you will take to reduce energy use.

Your building will win **renewable energy** to offset 10% of the building's greenhouse gas emissions if at least 50% of the occupants sign the pledge and take action!

Brought to you by the Harvard Green Campus Initiative
FAS, HMS, HSDM, HSPH
Jaclyn Emig, (Longwood) Jaclyn_Emig@Harvard.edu



Tools of Behavior Change

Communication Strategies

- Use simple, clear instructions





Tools of Behavior Change

Communication Strategies

- Use language that that is understood by the audience





Tools of Behavior Change

Communication Strategies

- Use Personal contact
- Use a credible source
- Use community level outreach

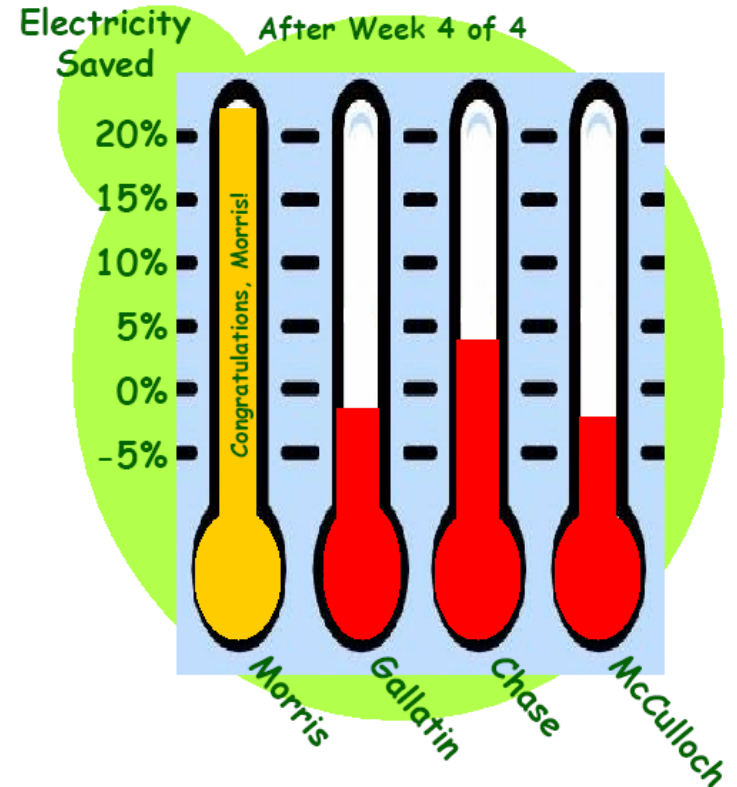


Tools of Behavior Change

Communication Strategies

- Provide Feedback
- Enhance community norms

HBS Dorms Energy Competition Who Will Win?...





Tools of Behavior Change

Communication Strategies

- Make it easy to remember
- Tailor your message to your audience

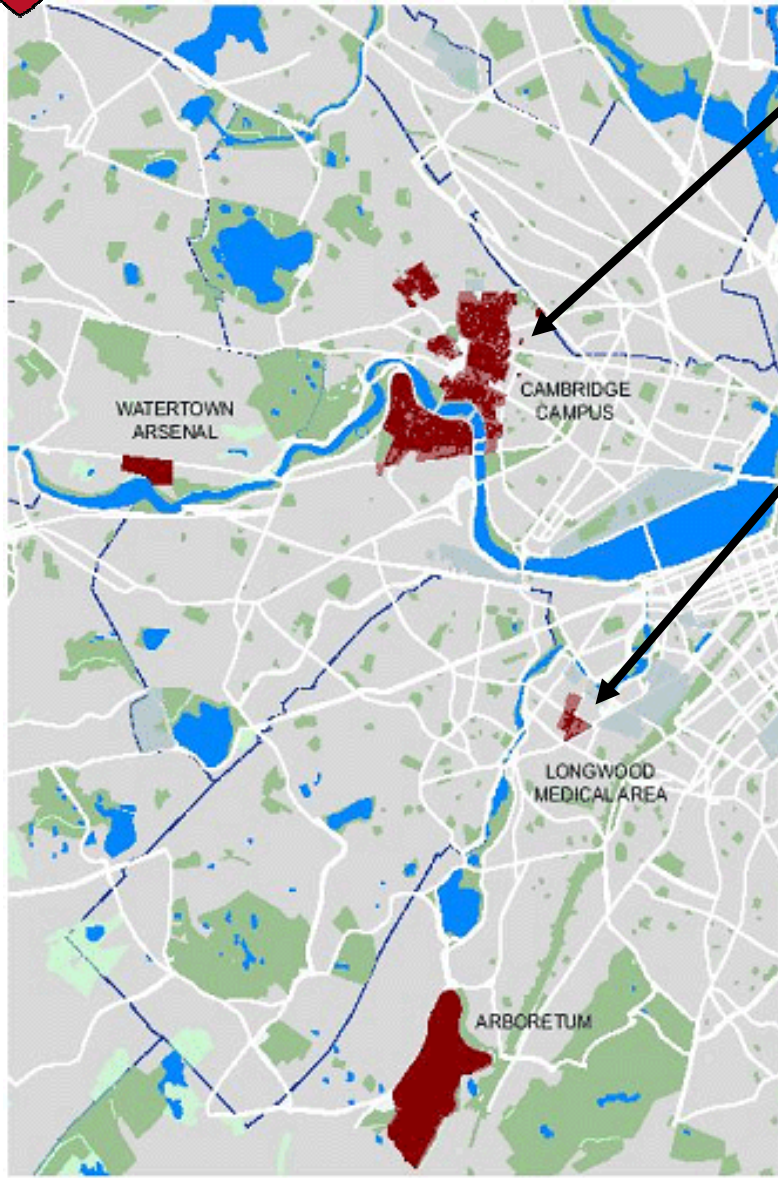




Case Study #1

“Shut the Sash” Campaigns in the Labs

Source:



FAS (College, Graduate School): 260 buildings, 40% total Harvard by ft², 14,386 students/staff/faculty

Longwood (Medical, Public Health, Dental): 33 buildings, 12% total, 5,219 students/staff/faculty

Many different building typologies: From huge, ultra-modern labs to 18th century houses converted to office space, and everything in between.



Labs use **3-5x**
more energy per
ft² than typical
office buildings.



Step 1: Research

Chemical fume hoods:

- Each costs about **\$3K/year** to operate,
- Harvard has nearly 1000 of them.
- Shutting the sash on some models reduces energy loss.



Step 2. ID & Work With Stakeholders





3. ID Barriers

“I thought we were supposed to keep it at 18 inches!”

“You mean this thing uses a lot of energy?”

“Umm, I just forgot.”

“It’ll never work.”



Step 4: Develop the Campaign

Pilot Project: Warren
Alpert Building, HMS



Step 4: Develop the Campaign

Prompts

SAVE ENERGY. BE SAFE.

SHUT THE SASH

If left open, your fume hood uses 3.5x the energy of a house!
Save up to 60% energy by closing the sash.



HMS, HSPH, FAS, HGCI

www.greencampus.harvard.edu

Many fume hoods use the same amount of energy as 3 $\frac{1}{2}$ houses!*





Step 4: Develop the Campaign

Incentives and Clear Communication

Did you know that the average fume hood uses the same amount of **ENERGY** as **3½ houses** if the sash is left open all the time?*



Help Conserve  Energy by closing your fume hood and **WIN** a **Wine & Cheese Party** for your lab in HIM!

Sponsored by HMS Operations and the Longwood Green Campus Initiative
The contest will run from **Monday March 13 – Friday March 31** in HIM

The Longwood Green Campus Initiative and HMS Operations Dept. work to **reduce energy use and environmental impacts in the labs**. This contest is a fun incentive to encourage and remind lab users to shut the sashes on fume hoods, which could save up to \$75,000 of dollars in wasted energy use per year.



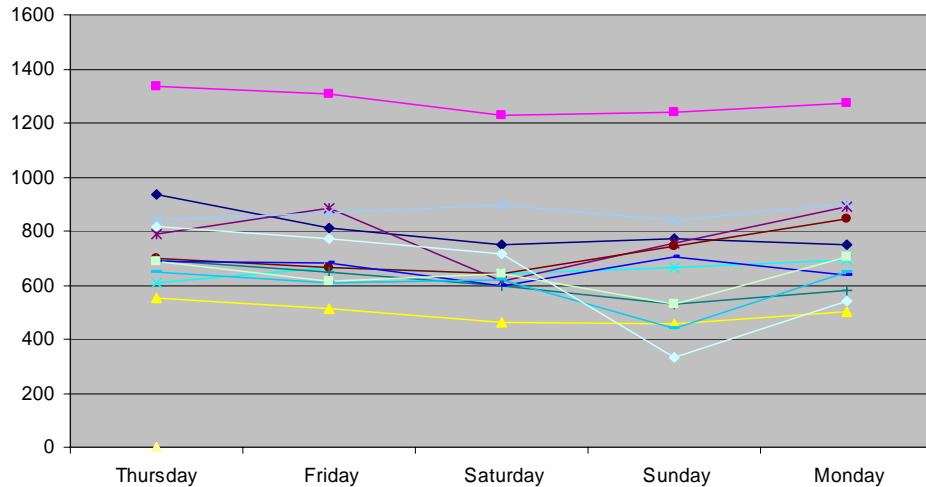
Communication!

- In person (walkthroughs)
- Emails announcements
- Group meetings
- Helpful students & staff
- Posters and flyers
- Mandate from PIs, administration



Step 5. Tracking and Monitoring

Average CFM per hood by lab, 8/25-8/29



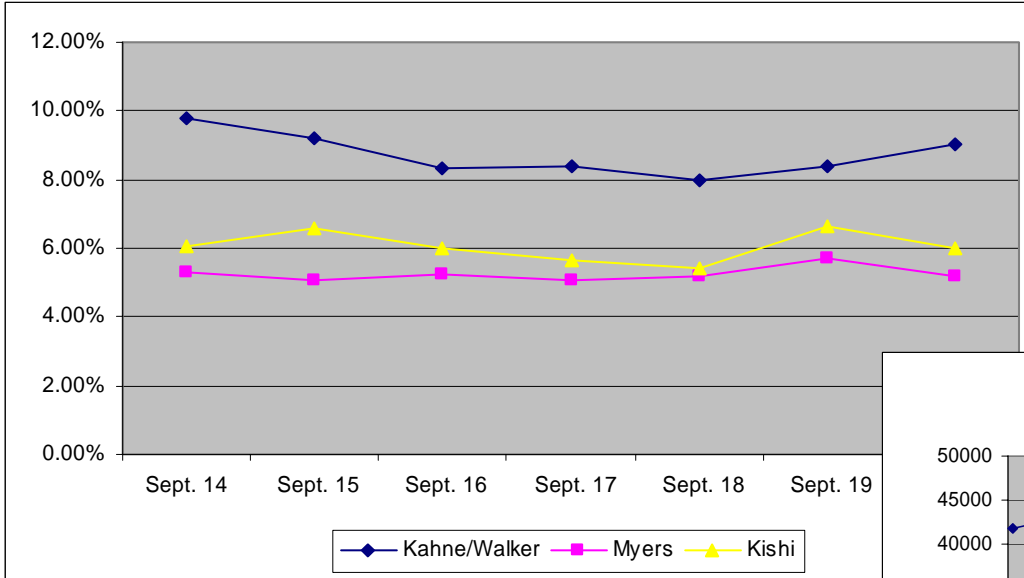
<>Date	Time	Point_1	Point_2	Point_3	Point_4
9/28/2005	00:00:00	2364.28	8000.00	995.00	5400.00
9/28/2005	00:30:00	1387.73	8000.00	995.00	5400.00
9/28/2005	01:00:00	1490.52	8000.00	995.00	5400.00
9/28/2005	01:30:00	1447.69	8000.00	995.00	5400.00
9/28/2005	02:00:00	1447.69	8000.00	995.00	5400.00
9/28/2005	02:30:00	1430.56	8000.00	995.00	5400.00
9/28/2005	03:00:00	1413.43	8000.00	995.00	5400.00
9/28/2005	03:30:00	1447.69	8000.00	995.00	5400.00
9/28/2005	04:00:00	1507.66	8000.00	995.00	5400.00
9/28/2005	04:30:00	1430.56	8000.00	995.00	5400.00
9/28/2005	05:00:00	1541.92	8000.00	995.00	5400.00
9/28/2005	05:30:00	1404.86	8000.00	995.00	5400.00
9/28/2005	06:00:00	1559.05	8000.00	995.00	5400.00
9/28/2005	06:30:00	1413.43	8000.00	995.00	5400.00
9/28/2005	07:00:00	1524.79	8000.00	995.00	5400.00
9/28/2005	07:30:00	1533.35	8000.00	995.00	5400.00
9/28/2005	08:00:00	1439.13	8000.00	995.00	5400.00
9/28/2005	08:30:00	1541.92	8000.00	995.00	5400.00
9/28/2005	09:00:00	1490.52	8000.00	995.00	5400.00
9/28/2005	09:30:00	1430.56	8000.00	995.00	5400.00
9/28/2005	10:00:00	1524.79	8000.00	995.00	5400.00
9/28/2005	10:30:00	1567.62	8000.00	995.00	5400.00
9/28/2005	11:00:00	1404.86	8000.00	995.00	5400.00
9/28/2005	11:30:00	1413.43	8000.00	995.00	5400.00
9/28/2005	12:00:00	1327.76	8000.00	995.00	5400.00
9/28/2005	12:30:00	1319.20	8000.00	995.00	5400.00
9/28/2005	13:00:00	1439.13	8000.00	995.00	5400.00
9/28/2005	13:30:00	1404.86	8000.00	995.00	5400.00
9/28/2005	14:00:00	1430.56	8000.00	995.00	5400.00
9/28/2005	14:30:00	1481.96	8000.00	995.00	5400.00
9/28/2005	15:00:00	1481.96	8000.00	995.00	5400.00
9/28/2005	15:30:00	1550.49	8000.00	995.00	5400.00
9/28/2005	16:00:00	1490.52	8000.00	995.00	5400.00
9/28/2005	16:30:00	2304.31	8000.00	995.00	5400.00
9/28/2005	17:00:00	2338.58	8000.00	995.00	5400.00
9/28/2005	17:30:00	1644.71	8000.00	995.00	5400.00
9/28/2005	18:00:00	2235.78	8000.00	995.00	5400.00
9/28/2005	18:30:00	2295.75	8000.00	995.00	5400.00

	Ground	1	2	3
8/24	1527.49	12812.09	15469.62	11152.39
9/14	1508.67	11520.43	14499.04	12361.57
10/5	1491.671	6824.466	11881.5	8289.189
11/22	1455.093	7060.528	9984.979	8567.781
12/13	1580.437	8404.878	11265.73	9495.324
1/13	1482.83	8690.201	12416.92	9935.308
3/7	1455.055	9856.145	10868.83	10233.16

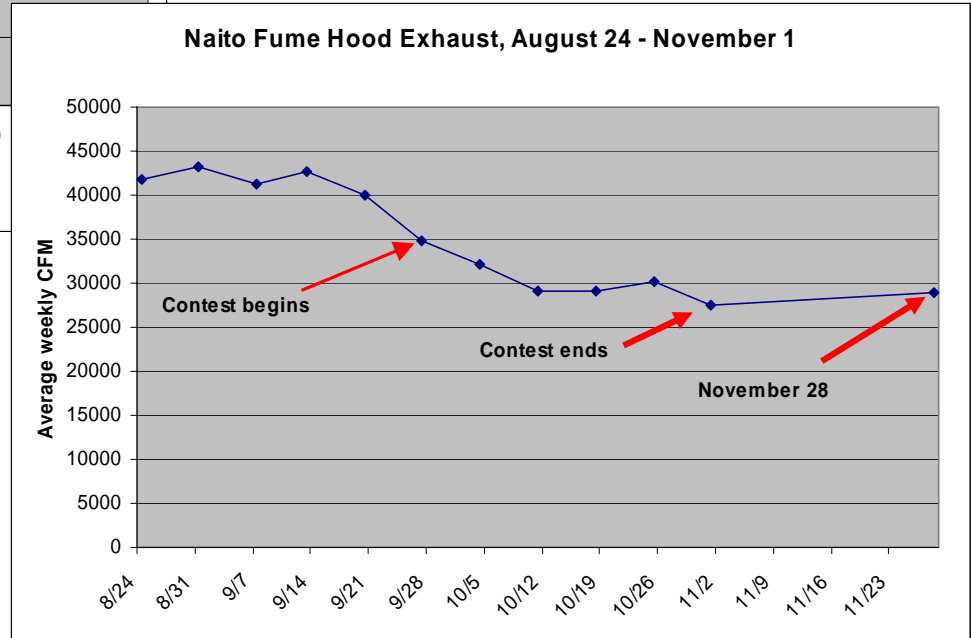


NAITO BUILDING FUME HOOD CONTEST STANDINGS *

*MacBeath and Zhuang coming soon!



Frequent Updates





Results

HMS Pilot: \$24,000 and 300,000 lbs. CO₂
From 30% sashes closed to 80% closed

Total after 6 campaigns:

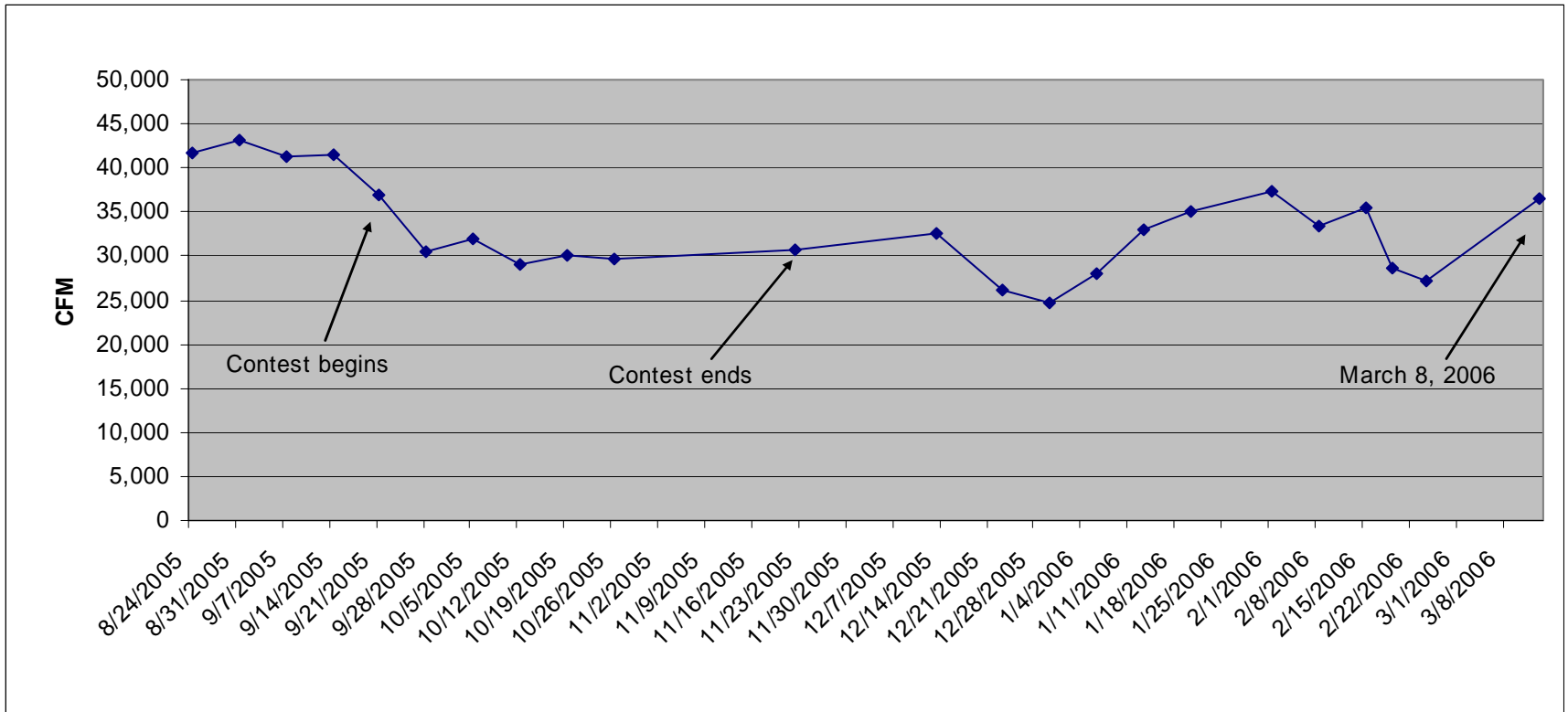
- **\$209,879** Savings per year
- 2,260,535 lbs. CO₂
- 222 cars off the road
- Electricity use of 132 households

Other Results:

- Reached out to hundreds of lab users
- Worked with EH&S,



Step 6: Continued Monitoring and Improvement





THIS HOOD SASH WAS LEFT OPEN OVERNIGHT.

Closing it would save \$1,500 a year (enough to heat an average home) and 10,600 pounds of CO₂ emissions.

A closed hood is also safer for you and others in the lab.

Please remember to shut the sash.

Thank you!

Jerry Connors/Mike Paterno

Date



Case Study #2: Harvard Campus Sustainability Pledge





Online Pledge Campaign

emPOWER Harvard:
Take the Campus Sustainability Pledge!

Harvard Green Campus Initiative




Photo: Warren Grez, NREL/DOE

[Thanks for your interest in the Campus Sustainability Pledge!](#)

The pledge campaign ended on November 23, but you can still get involved by visiting the [Harvard Green Campus Initiative website](#) or by contacting [Maura Leahy](#) (617-384-9604).

You'll be happy to know that over 4000 people signed the pledge this year, and that 20 buildings won renewable energy to offset 10% of their greenhouse gas emissions. This is a huge accomplishment, and a big improvement over last year's "Go Cold Turkey" pledge. See the official results [here!](#)

You can still make a personal commitment by considering the [actions listed in the pledge statement](#) and implenting some or all of them in your life.

PLEDGE HOME

- [The Challenge & Rules](#)
- [The Prize: Wind energy](#)
- [Promote the Pledge](#)
- [Energy & the Environment](#)
- [History of Go Cold Turkey](#)
- [Contact the Organizers](#)
- [Sponsors & Participants](#)
- [Energy Use In Your Building](#)
- [Harvard Sustainability Principles >](#)

- Commitment
- Competition
- Meaningful incentive
- Community effort
- Environmental ethics



EmPOWER Harvard



The Harvard Campus Sustainability Pledge

I, _____, support Harvard University's efforts to reduce its environmental impacts and implement **Campus-wide Sustainability Principles**. I will make my contribution by pledging to do **at least three** of the most applicable actions listed below (please check at least 3 boxes).

- Make sure that my computer is set to go into sleep mode.
- Turn my thermostat down in winter and up in summer.
- Turn off computers, lights, and other equipment when not in use.
- Buy/request environmentally preferred products such as recycled paper, Energy Star appliances, and compact fluorescent bulbs.
- Make double-sided copies.
- Once a week, take the T or a bike to work instead of driving.
- _____



emPOWER harvard

take the campus
sustainability
pledge

pledge online at

<http://www.greencampus.harvard.edu/pledge>



Photo: Warren Gretz, DOE/NREL

Win Renewable Energy for your building!

Show your support for a sustainable Harvard campus, and pledge to take action to reduce your own energy use!

Sign the pledge online at

www.greencampus.harvard.edu/pledge by

November 23 and choose 3 actions you will take to reduce energy use.

Your building will win **renewable energy** to offset 10% of the building's greenhouse gas emissions if at least 50% of the occupants sign the pledge and take action!



Communication Strategies

- Champions within buildings
- Posters to department administrators
- List-serves, emails from department heads
- Gazette, Crimson, HR newsletter
- REPs
- Pledge cards to all faculty
- Tabling in dining halls



Pledge Results

Dudley	88.9%
Phillips Brooks	86.7%
60 JFK	81.8%
Geology	78.4%
Massachusetts	77.1%
Gund Hall	76.5%
Hoffman	75.4%
Kirkland	68.6%
Morton Prince	66.7%
Cabot	56.1%
Quincy	54.0%
Music	50.9%
Leverett	50.8%
1705 Mass Ave	50.0%
77 Dunster	50.0%
TMEC	55%
Gordon Hall	53%
160/164 Longwood	63%
Countway Library	57%
Shattuck House	72%
Kresge (bldg. 3)	64%

- **4300+** people signed
- **20 buildings** reached the 50% challenge
- **4 million kWh** of wind energy purchased
- **6.5 million lbs.** of greenhouse gas emissions offset (equivalent to 500 cars)



“I ask you to
remember and uphold
the pledge you took to
work toward a greener
campus.”

-Email to Massachusetts Hall staff
from Harvard president
Lawrence Summers, 12/6/05.



What have we learned?

- The **CBSM tools** are very helpful!
- **Who needs to be involved?** Figure this out early on.
- Identify and heavily utilize **existing channels of communication**
- People like **competition**
- **Updates on progress** keep people engaged
- You need to **stay involved** after the campaign

Green Living Programs at Harvard University

Resource Efficiency Program
Graduate Green Living Program

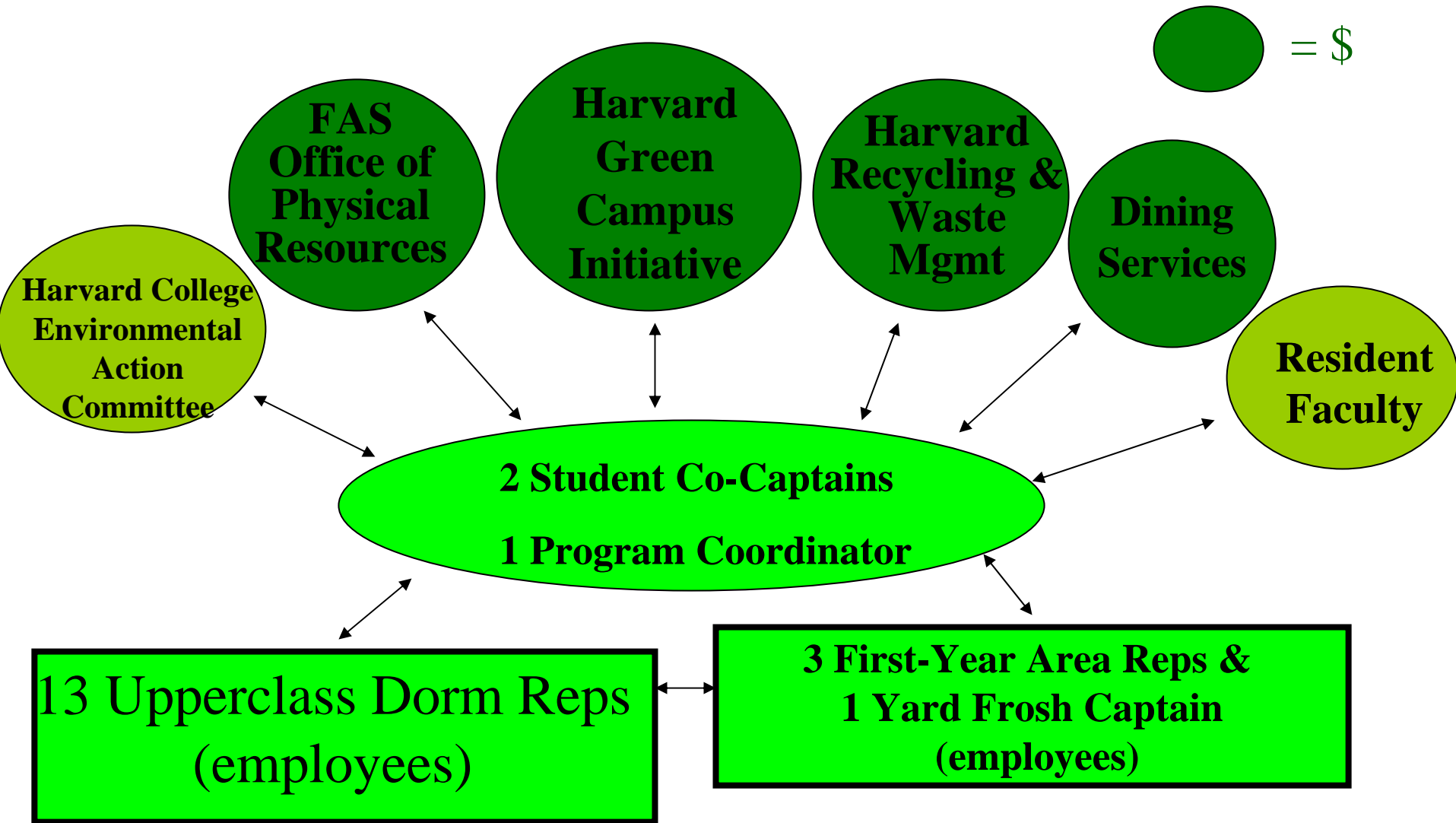
FAS Resource Efficiency Program (REP)



What is REP?

REP is a unique **peer environmental education program**. REP is a true **collaboration** between students and the administration. Student “REPresentatives” are paid to **communicate** with other students in their residential communities and act as a **liaison** between students and administrators about **sustainability, comfort, health, conservation, and efficiency** issues inside the dorms.

Overview of REP



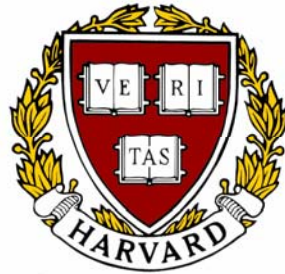
Graduate Green Living Programs

Graduate Green Living Programs

Harvard Real Estate Services - 3 apartment complexes (1,800 tenants)

Harvard Law School - 8 dorms (700 students)

Harvard Business School - 4 dorms (350 students)



Grad Green Living Program Goals

1) Electricity & Steam Consumption:

Reduce by 10%

2) Water Consumption:

Reduce by 10%

3) Recycling:

Increase by 30 – 40%

4) Reduction in maintenance and repair calls due to better occupant education.

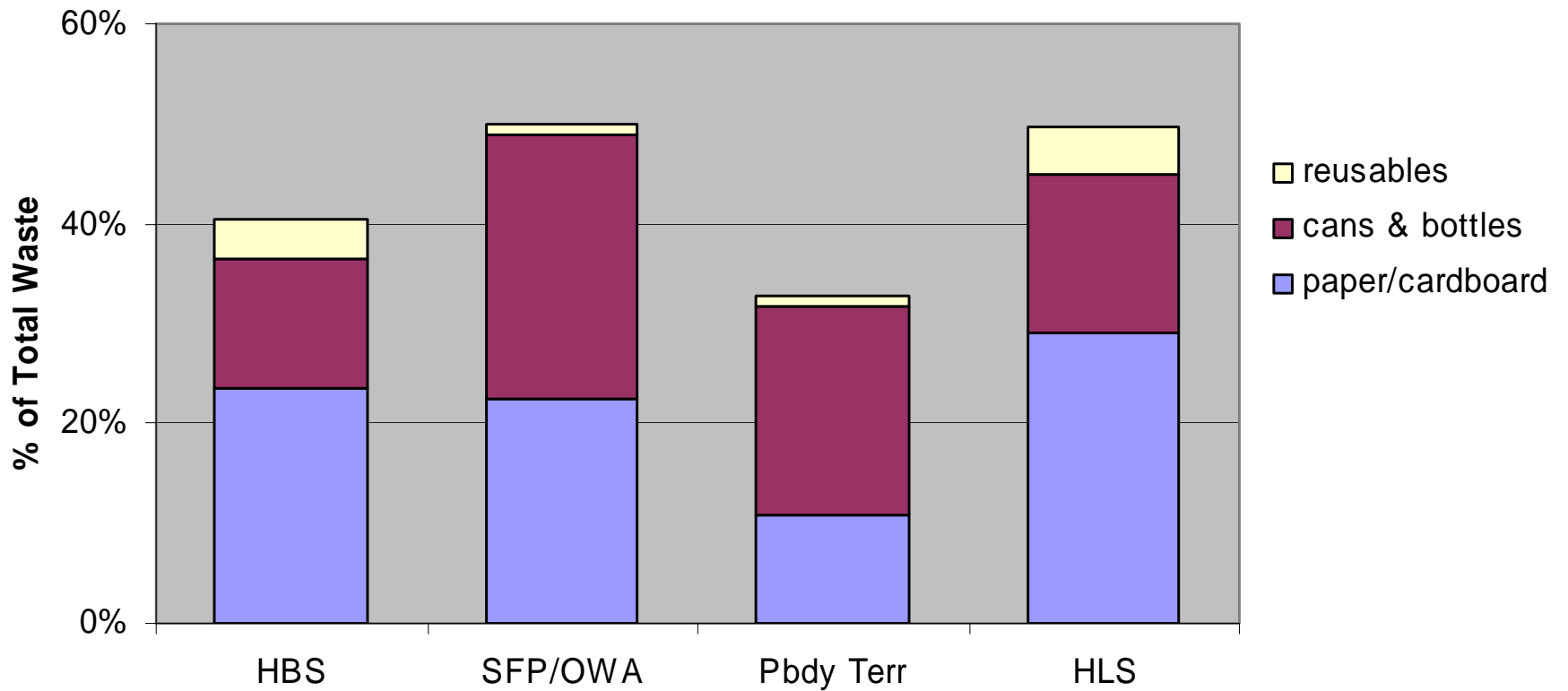
What a Rep does...

The Rep will...

- act as a leader and example for the whole House or Yard to follow
- create awareness about conservation & environmental issues on campus
- initiate actions to “green” areas of the campus, creatively finding ways to approach each possible project
- act as a **resource** for students’ questions and giving them the information they need on how to conserve
- foster a sense of **community** within the house as well as a sense of **competition** between the houses
- foster a sense of **house (or dorm) pride** in keeping the house “green”
- give up-to-date **eco-facts & statistics** to the students, creating interest and care

Annual Waste Audit

Waste Audit Results



Recycling



Once you've drunk me,
Don't just junk me!

Recycling is now available for all bottles and cans

**Feedback? Questions?
Contact the REP
in your House**

Caitlin Frame, green-pfoho@hcs
Jason Armstrong, green-currier@hcs
Alejandro Fernandez, green-cabot@hcs
or [green-\[your House\]@hcs](mailto:green-[your House]@hcs).



**HARVARD
RESOURCE
EFFICIENCY
PROGRAM**

Green Cup and Other Competitions

October 2002 Results Are In For...

GREEN CUP

THE INTER-HOUSE AND INTER-DORMITORY CONSERVATION COMPETITION

Mather House

You Got 4th Place!

Are you gonna stand by while QUINCY conserves more water, electricity, and heat than your house?

What you can do to help your dorm win Green Cup next month:

Most dorms increased their water consumption for October, so you can

turn the water off while brushing your teeth

contact your super if you have a leaky faucet

turn the water off while soaping up in the shower

and (our favorite) shower with your friends!

PLUS: If you're leaving for Thanksgiving weekend, make sure to turn off all of the electrical equipment you leave behind!

It's the small things you do that make a **big** difference!

Here's how your conservations efforts compared to other houses'...

PLACE	HOUSE
1	Quincy
2	Dunster
3	Leverett
4	Mather
5	Winthrop
6	Adams
7	Eliot
8	Currier
9	Pfoho
10	Kirkland
11	Cabot
12	Lowell

COMPETE TO CONSERVE

SPONSORED BY THE ENVIRONMENTAL ACTION COMMITTEE AND THE OFFICE OF PHYSICAL RESOURCES
QUESTIONS AND COMMENTS CAN BE DIRECTED TO EYLZC@FAS.GR.GUEN.AT@FAS
WWW.FAS.HARVARD.EDU/~EAC

Energy

Competition 2006*

Chase vs. Gallatin vs. Morris vs. McCulloch

**Save the most energy
during February and Win
a Finale Dessert Party of
Movie Tickets for your
dorm!**

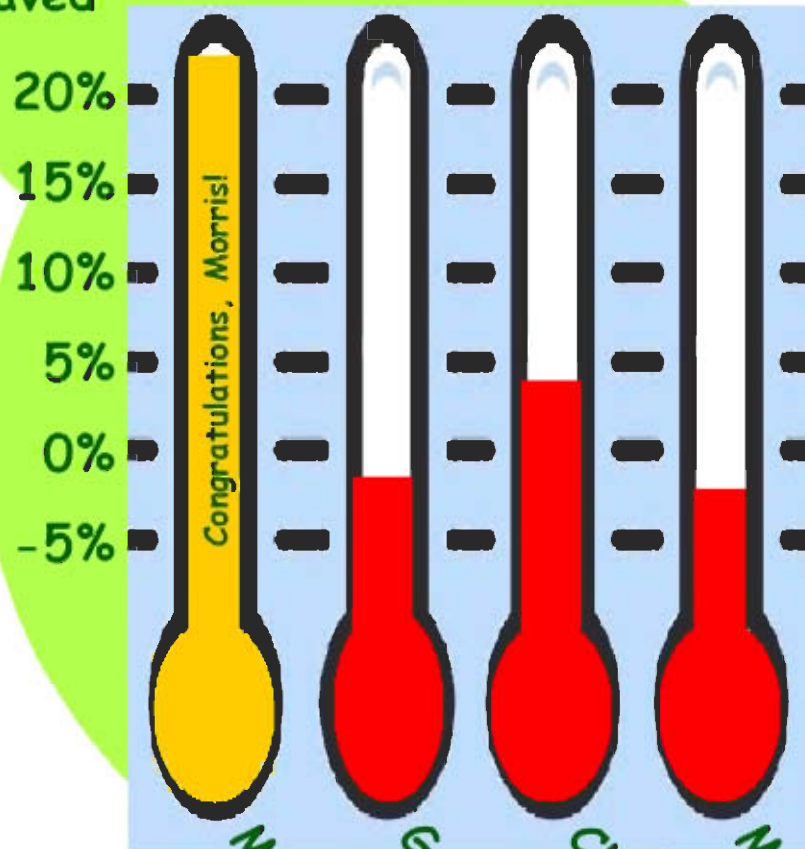
* An HBS tradition since
2006

HBS Dorms Energy Competition

Who Will Win?...

Electricity
Saved

After Week 4 of 4



Morris

Gallatin

Chase

McCulloch

EnviroCitizens

Mather's
First-Ever
**ENVIRO
CITIZEN!!!**

*A TRUE
Recycling
Green Machine!*

Model Dorm Room



Sleeping computers and monitors use less than 15% of the energy they use in full power mode.

One desktop left ON for 1 year releases over 1500 lbs. of CO₂! You need 100-500 trees to offset this!

TURN ME OFF

SHAVE
MINUTES off
your SHOWER TIME

SHOWER
REFRESHING



Eco Study Breaks & Other Social Events

... and much more!



REP's Impact on Campus

Why has REP been successful?

- Strong partnership between students & administration
- Coordination of efforts between departments (Harvard Recycling, Office of Physical Resources, etc.) and between students' environmental work on campus
- Paid students lead to higher accountability than volunteers
- One "visible" face within the dorms enables students to feel okay about asking questions and seeking out answers from their fellow student Rep
- Ability to institutionalize sustainability efforts on campus
- Behavioral change/educational campaigns have an impact on daily life not just within the dorms, but everywhere the educated students interact (in the classroom, athletics, off-campus, after graduation), creating a culture of change across the campus

Contact Info & Questions

Jaclyn Emig

Coordinator, Longwood Campus Program

Visit our new **website** for information and resources about all our programs at

<http://www.greencampus.harvard.edu>