

TAKE ACTION TO GREEN UBC LABS!

DAY 2 – SUSTAINABILITY TRAINING



UBC GREEN LABS



GREEN LABS PROGRAM

VISION

To be a leader in innovative sustainable lab practices with a research and teaching community deeply committed to environmental responsibility.

MISSION

Green Labs engages and inspires UBC laboratory users to integrate sustainability into their research activities and builds capacity and expertise in sustainable practices, to support a culture of sustainability, reduced resource consumption and impacts to the environment.

PROGRAM OBJECTIVES



ENGAGE & BENEFIT UBC SCIENTIFIC COMMUNITY

- Leadership opportunities, training & recognition
- Educational workshops & resources
- Equipment rebate program



CONSERVE RESOURCES & PROTECT ENVIRONMENT

- Behaviour change initiatives
- Optimization opportunities



SUPPORT SUSTAINABILITY INNOVATION

- Green Labs fund
- Special projects & pilot studies
- Ideas campaign
- Continuous improvement



IMPROVE EFFICIENCY AND REDUCE COSTS

- Engagement Strategy
- M&V driven approach

PROGRAM IMPACT AREAS & GOALS



- Achieve measurable conservation/reduction
- Increase participation in best practices
- Build expertise in sustainable practices
- Foster distributed leadership and audience led action

WHAT YOU CAN DO



Identify energy hogs in your building/department. Chill Up. Shut the Sash.



Tell us about once through water cooled equipment



Participate in & promote lab plastic recycling



Reduce, Reuse, Recycle. Use the sustainable purchasing guide & ACT label



Join a sustainability committee / green team / working group
Help lead conservation campaigns in your building/department
Integrate sustainability into site orientations



WHAT IS UBC GREEN LABS DOING




Chill Up Challenge

-70°C is the new -80°C

- Many samples don't need -80°C storage
- Extends freezer lifespan
- Saves on equipment costs
- Conserves up to 42% energy



did you remember to shut the sash?

open fume hoods = energy waste





TAKE ACTION



TOOLKITS




ACT.

Accountability, Consistency, Transparency.

The Environmental Impact Factor Label

Product Name

Manufacturer:  THE UNIVERSITY OF BRITISH COLUMBIA

Green Products List

As the demand for greener laboratory products rises, the variety of environmentally friendly products available to the user and environment.

ENERGY EFFICIENCY		Manufacturer - Product	Benefit
Product	Product Content		
		5.3	



CREATING CHANGE IN LABS

3 KINDS OF CHANGE



Behaviour change +
Organizational change

Culture change

Infrastructure

WHAT DO WE CHANGE?



Identify **HIGH IMPACT** opportunities

WHY?

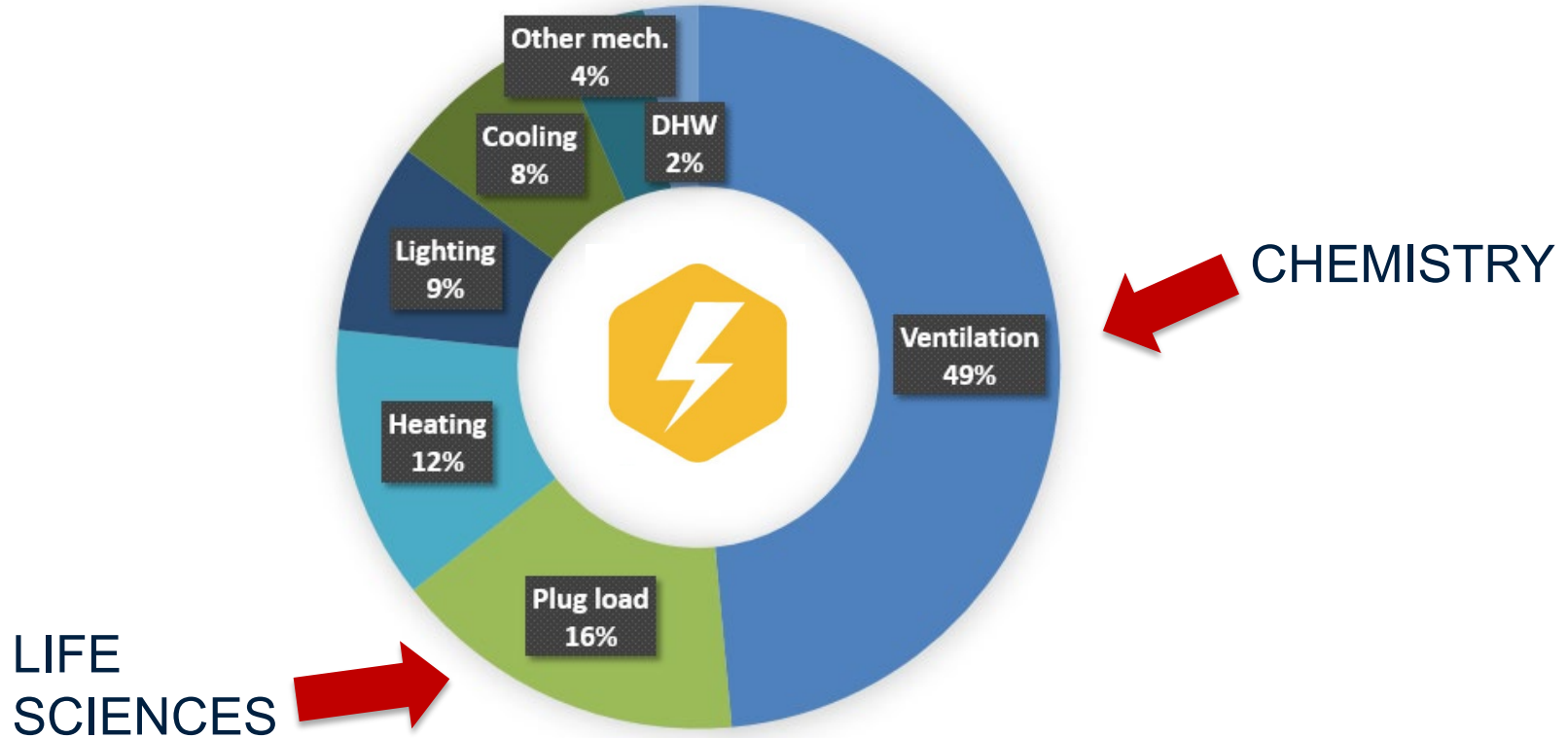
- Change is hard
- Helps us focus our efforts & achieve measurable impact

HOW TO FIND HIGH IMPACT OPPORTUNITIES

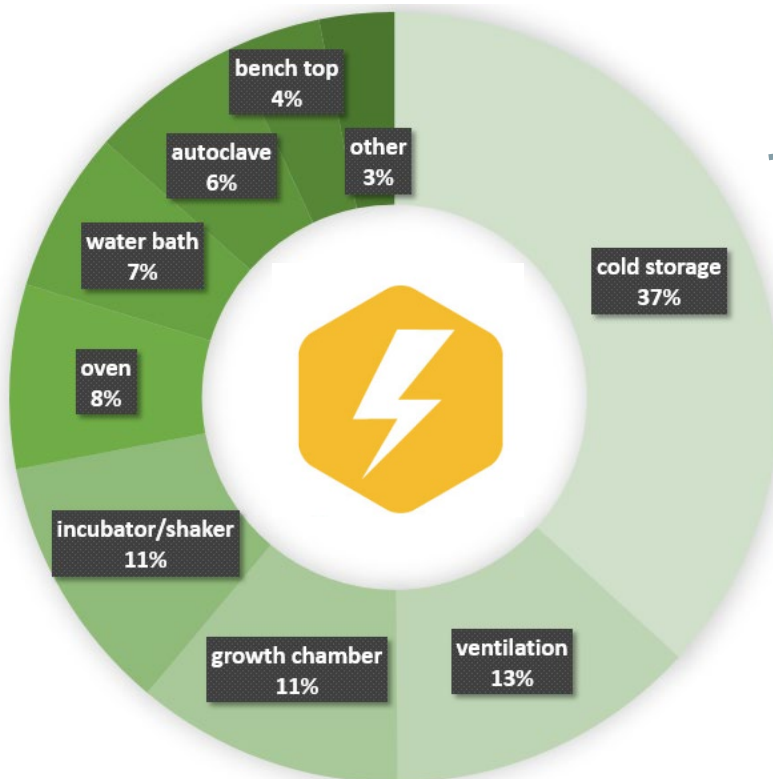
Things to consider:

- The building you work in – what infrastructure is in place/what's missing?
- The equipment being used by people around you
- Your sphere of influence
- Resources available to you

ENERGY CONSERVATION OPPORTUNITIES IN LABS



LIFE SCIENCE PLUG LOAD SAVINGS OPPORTUNITIES



-20C Freezers 19%

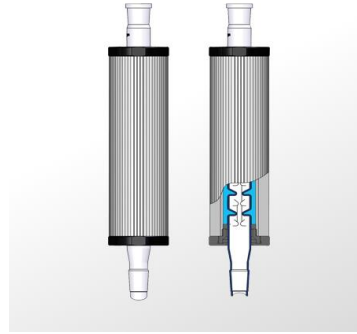
ULT Freezers 18%

Fridges 6%



WATER CONSERVATION

**Identify
once
through
water
uses**

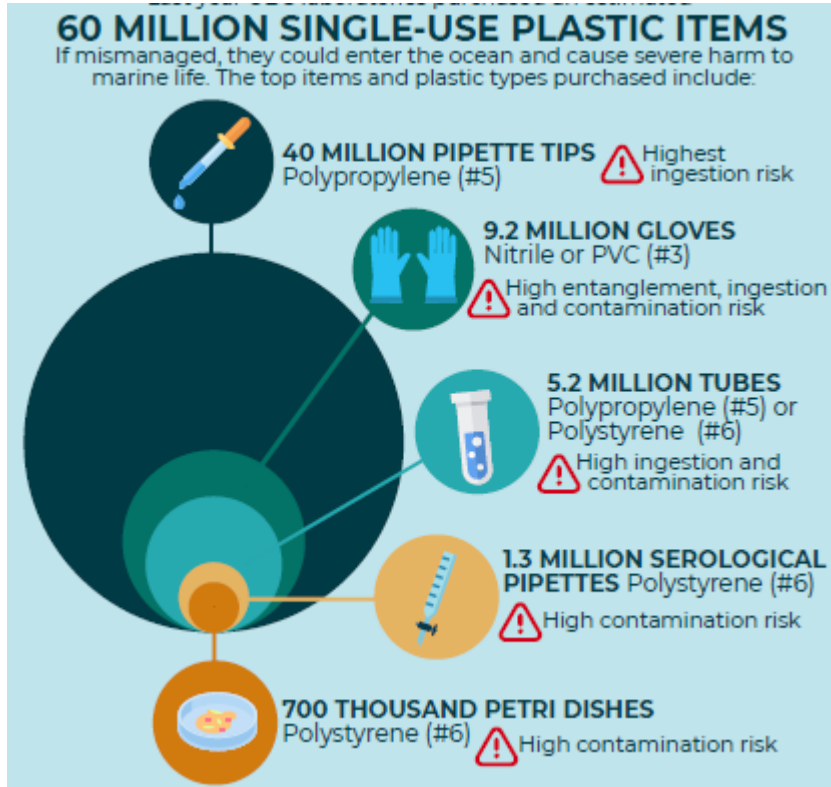


**Check to make
sure that your
building uses
research rather
than medical
autoclave**





PLASTIC REDUCTION/RECYCLING



- **Promote lab plastics recycling**
- Modify processes to encourage re-use of items where possible
- Choose recyclable materials where





LAB SOLID WASTE STREAMS

Glass
Other



Animal Bedding



Styrofoam



Soil



?

Help us identify and quantify these and other lab waste streams



PURCHASING

ACT.
Accountability, Consistency, Transparency.
The Environmental Impact Factor Label

Product Name _____

Manufacturing Location _____

Manufacturing

Manufacturing Impact Reduction (6)

Renewable Energy Use (No)

Responsible Chemical Management (10)

Shipping Impact (7)

Product Content (5.3)

Packaging Content (5.4)

User Impact

Energy Consumption (5)

Water Consumption (N/A)

Lifetime Rating (2)

End of Life

- Work with your department's purchasing team to prioritize energy efficient & recyclable products
- Tell your suppliers you're looking for ACT Labeled products
- Work with us to finalize the ULT freezer rebate program



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Green Products List

As the demand for greener laboratory products rises, the variety of environmentally friendly merchandise grows. This list outlines greener alternatives to traditional laboratory products and equipment and what benefits they provide to the user and environment.

ENERGY EFFICIENCY		
Product	Manufacturer - Distributor	Benefit

OPPORTUNITIES IN YOUR BUILDING/DEPARTMENT



Which of the following does your building have a lot of?

- Fume hoods
- Ovens
- Freezers/fridges
- Other heating/cooling equipment
- Growth Chambers
- Once through water equipment (cooling, vacuum, DI water, wash systems)
- Autoclaves



Does your lab/department/building

- Participate in lab plastics recycling?
- Generate large volumes of not accepted plastic materials



Are you responsible for purchasing?

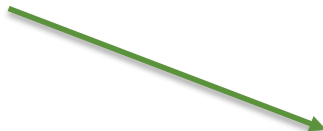
ACTION PLANNING



Opportunities	Impacts / rationale	Vision / Desired Outcome	Behaviour Change (BC) or Organizational Change (OC) Opportunity
<i>Increase lab plastic recycling</i>	<i>Green labs has shared estimate on lab plastics volumes – our department uses single use plastics for many processes.</i>	<i>Divert all accepted non hazardous plastics to recycling</i>	<i>BC – campaign to encourage sorting. OC – ensure lab plastics is covered in lab/building orientations</i>
1.			
2.			



BEHAVIOUR & ORGANIZATIONAL CHANGE



Toolbox of Interventions



Commitments Create accountability



Communication Make your message clear and vivid



Prompts Visual or auditory aid as a reminder



Competition Use friendly rivalry to drive action



Incentives Enhance the motivation to act

- ☐ Orientations/trainings
- ☐ Safety inspections
- ☐ Department meeting agendas
- ☐ Policy/protocol
- ☐ Building based teams/committees
- ☐ Working groups
 - ☐ Lab waste
 - ☐ Equipment rebate
 - ☐ Lab certification
 - ☐ Equipment sharing

SHARING BACK AND NEXT STEPS



HOW CAN WE SUPPORT YOUR ACTION?

- Funding?
- Research? (SEEDS)
- Campaign toolkit?
- Collaboration?
- Mentorship?
- Other?



DOCUMENT YOUR IMPACT



- Measure / track
- Share your stories



ANOTHER WAY TO TAKE ACTION

Working Groups

- Lab waste
- Equipment rebate
- Lab certification
- Equipment sharing





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