TAKE ACTION TO GREEN UBC LABS!

DAY 2 – SUSTAINABILITY TRAINING
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

- 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

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

Green Products List
As the demand for greener laboratory products rises, the variety of environmentally friendly alternatives to traditional laboratory products and supplies provides the user and environment with more sustainable options.

Energy Efficiency
Product
Manufacturer
Benefit

 TOOLKITS

- ALE ACTION
- OPEN ACCESS
- TRANSPARENT
- ACCOUNTABLE
- CONSISTENT
- GREEN

UBC
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

- Ventilation: 49%
- Heating: 12%
- Plug load: 16%
- Lighting: 9%
- Cooling: 8%
- DHW: 2%
- Other mech.: 4%

LIFE SCIENCES

CHEMISTRY
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 possible
**LAB SOLID WASTE STREAMS**

<table>
<thead>
<tr>
<th>Glass</th>
<th>Animal Bedding</th>
<th>Styrofoam</th>
<th>Soil</th>
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</table>

Help us identify and quantify these and other lab waste streams
PURCHASING

• 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

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.
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

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