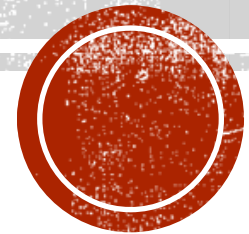


# **DIGGING DEEP INTO OPTIONS TO ADDRESS THE MOUNTAIN OF ICE PACKS UNIVERSITY LABS RECEIVE**



By: Helina Ayalew, CU Green Labs Program

# LEARNING OBJECTIVES

- Learn why recycling/reusing ice packs is challenging
- Learn what other institutions are doing to address problem
- Learn what manufacturers recommend for environmentally friendly disposal
- Learn the results of CU Green Lab's multi-prong approach to finding a solution



# THE ICE PACK PROBLEM...

CU Boulder  $\approx$  6000 ice packs received/year  
 $\approx$  2 tons of landfill waste

Small amounts used for outgoing shipments

Affects:

- Hospitals, Medical Centers
- Research Companies
- Universities
- Other research institutions

National and International Problem



# WHY ADDRESS THIS PROBLEM?

Scientists want to address it! An engaging tool for Green Labs Programs.

Confusion & conflicting messages about what can be done with this waste

Ice packs are heavy. Weight affects:

- campus waste diversion goals
- landfill costs



Re-use should be possible and the right thing to do!





# SEARCHING FOR POSSIBLE SOLUTIONS

1. Ask what others are doing
2. Ask ice pack companies about environmentally friendly disposal
3. Explore drain dumping with EH&S and city waste water
4. Outreach about re-use by local companies
5. Extended Producer Responsibility by companies shipping this material to our campuses



# CONTACTING OTHER UNIVERSITIES

## **University of Michigan-Ann Arbor**

Ice Pack reuse with a local medical organization.

## **Emory University**

Re-use with a local distributor

## **University of North Carolina at Chapel Hill**

Ice packs re-use by a local farm and cheese producers.

## **University of Wisconsin-Madison**

Temporarily had a program with its cooler re-use program

## **Harvard** – small program with NEB



# ASKING ICE PACK COMPANIES ABOUT ENVIRONMENTALLY FRIENDLY DISPOSAL

9 companies contacted

Inner contents:

- Most report non-toxic, non-biodegradable
- One or two reported biodegradable contents

Disposal recommendation:

- Many suggest emptying inner contest in trash and recycling plastic sleeve
- Several suggest dumping inner contents down drain



# EXPLORING DRAIN DISPOSAL

1. Our EH&S = labs cannot dump in drain
2. If allowed by Boulder Waste Water, EH&S will collect and dump
3. Picking 3 most common ice packs with liquid-like inside
4. EH&S submits request to Boulder Waste Water including:
  - Volume/day
  - Exact chemical composition (not just MSDS info)... may require non-disclosure agreement with ice pack company

Name of Ice Pack	Company
Arctic Fox	Cold Chain Solutions
Black Ice Cold Pack	Polar Tech Industries, Inc.
Creative Ice	Creative Ice Gel Refrigerant
Cold Ice Gel Refrigerant ***interior is a bit jelly	Cold Ice, Inc.
Nordic Ice	Temperatsure, Inc.
Santa Cruz Biotechnology	Lifoam Industries, LLC
PolarPack	ThermoSafe
Koolit and KoolTemp	Cold Chain Technologies

Table 1: List of ice packs with non-toxic, liquid interior that could be considered for drain disposal with approval





# ICE PACK REUSE – ANY COMPANIES INTERESTED?

- Contacted ~50 local research companies, farms, Fisher, etc.
- Biggest issue: Contamination concern
- Suggestion: CU Boulder set up process to sterilize & certify non-contaminated
  - EH&S: Not a viable option
  - But companies can have at their own risk, signing legal document holding CU Boulder harmless
- Our EH&S team worked with CU legal to create the legal document



# BERRY PATCH FARMS WANTED ICE PACKS

- Signed legal document
- Repackaging in clean plastic sleeve to avoid contamination concern
- Interested in monthly pickups



# EXTENDED PRODUCER RESPONSIBILITY BY COMPANIES SHIPPING THIS MATERIAL

- Started discussing this need with sustainability representatives at companies shipping it to our campuses
- Buying power of those companies can push change with the ice pack companies or other solutions



# EXTENDED PRODUCER RESPONSIBILITY (EPR)

An EPR policy is characterized by:

1. The shifting of responsibility (physically and/or economically; fully or partially) upstream towards the producer and away from the municipalities
2. The provision of incentives to producers to take into account environmental considerations when designing their products

Examples:

- “take-backs” for spent products for re-use or resource recovery
- delegate this responsibility to a third party, a so-called producer responsibility organization (PRO)



# NEXT STEPS

- Will farm re-use will be long term? Are there other local companies?
- Continue effort to see if drain dumping is viable option
- Work with I2SL Waste Diversion Working Group on Extended Producer Responsibility for ice packs
- Organize a petition where individuals can indicate their interest in having companies address this problem





# QUESTIONS?

- **Helina Ayalew**
  - *CU Green Labs Assistant and Recycling Coordinator*
  - [Helina.Ayalew@Colorado.EDU](mailto:Helina.Ayalew@Colorado.EDU)

