

Engaging Environmental Health Labs To Establish A Model For Sustainability

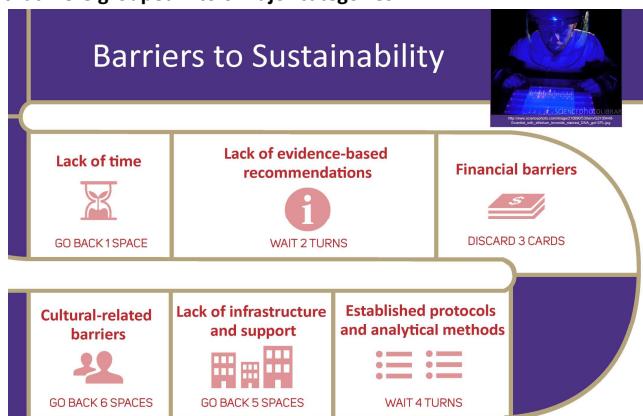


PROJECT SUMMARY

The Department of Environmental And Occupational Health Sciences (DEOHS) is part of University of Washington's (UW) School of Public Health. The mission of DEOHS is to study how environmental factors can harm human health and how to identify, prevent, and control their effects.

Our goal-through research, teaching, and service-is **prevention** and **protection**. With expertise in environmental health, occupational safety, and the health effects of climate change, researchers in the 20 DEOHS laboratories have the capability to provide **leadership** in laboratory sustainability and serve as an exemplary model. Through this project we successfully engaged laboratories in the UW Green Laboratory certification process, identified barriers to laboratory sustainability, assessed potential intervention opportunities to reduce waste, save energy, and transition to safer and greener chemicals, and provided the UW Green Labs certification program with recommendations based on our experience.

Interviews with DEOHS lab managers revealed barriers to sustainability that were grouped into 6 major categories:

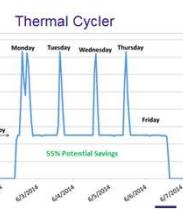


To address barriers, we assessed several potential intervention strategies:

Development of lab recycling poster to divert trash from landfill:

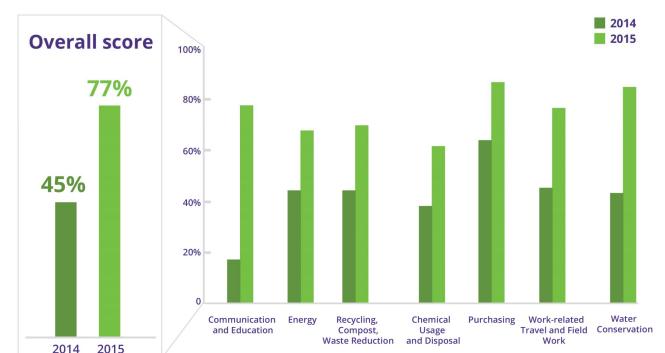


Monitoring energy use of lab equipment to identify energy saving opportunities:



Use of chemical hazard assessment tools to compare chemicals:

| QCAT Assessment | | | | | | | | | | | |
|---|---|----|-----------------|----|-----|--------|-----|-----|------|-----|-----|
| View source View key ethidium bromide (1239-45-8) | | | | | | | | | | | |
| Group I: Human | | | Group II: Human | | | Ecotox | | | Fate | | |
| C | M | R | D | E | AT | ST | SdS | SdH | VS | HE | AA |
| M | Y | OG | DG | DG | aff | x | * | * | x | CA | Ex |
| L | Y | HG | DG | DG | M | DG | DO | L | M | aff | aff |
| GreenScreen® Assessment | | | | | | | | | | | |
| View source View key SYBR®-Safe (1030026-36-8) | | | | | | | | | | | |
| Group I: Human | | | Group II: Human | | | Ecotox | | | Fate | | |
| C | M | R | D | E | AT | ST | SdS | SdH | VS | HE | AA |
| M | Y | OG | DG | DG | M | DG | DO | L | M | aff | aff |
| L | Y | HG | DG | DG | M | aff | aff | L | M | aff | aff |



2015 UW Green Lab certification scores from DEOHS labs increased when compared to 2014 scores from applications completed at the beginning of the project.

DESCRIPTION

We asked DEOHS labs to complete UW Green Lab certification applications at the beginning of the project in the spring of 2014 and used results as a baseline measure. We conducted follow-up interviews with lab managers to learn more about barriers to sustainability. From the baseline results and interviews, potential interventions were identified. We collaborated with the labs to assess interventions related to reducing solid waste, conserving energy, and transitioning to safer and greener chemicals. Labs completed certification applications again one year later after the baseline in the spring of 2015. Baseline results from 2014 were compared to new results from the 2015 applications, and overall and section scores increased substantially. The overall average score increased by 32%. Our areas of emphasis during the project period were energy conservation, solid waste reduction, and safer and greener chemical use. By the UW Green Labs program metrics, scores increased in all of these areas. However, the most substantial change was in the area of communication and education where scores increased by 60%. When we asked labs what they thought the most valuable part of the project was, most labs have mentioned the increased awareness about lab sustainability and resources, stating that there is increased and deliberate discussion about sustainability now when there wasn't before. This is leading to increased communication about how to integrate sustainability into lab practices.

CREDITS

Project Team: Jen Krenz (DEOHS Staff Researcher, Project Manager), Nancy Simcox (Director, DEOHS Continuing Education Programs), Jill Stoddard Tepe (Program Coordinator, DEOHS Continuing Education Programs), Isaac Chamberlain (Student, Atmospheric Science, UW), Chris Simpson (DEOHS Associate Professor)

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Please contact Jen Krenz (jkrenz@uw.edu) with any questions.