Zero Waste Labs

The CU Environmental Center's Applied Learning Lab for Zero Waste sponsors Internships and supports coursework to create better linkages between higher education and the sustainable materials management (SMM) industry- which broadly consists of reuse, recycling, composting companies and organizations. CU Students interested in Zero Waste academically or professionally, can get involved in several ways. Students can earn upper division internship credits through their department for CU's Zero Waste Research Internship. Students can also apply their academic work through class projects, research papers, and other faculty assignments. Several local and national projects are underway, with multi-disciplinary opportunities open on an ongoing basis. Projects underway or recently concluded:

National Sustainable Materials Management Resource Center Project

Overview: NRC's Resource Center As the climate crisis sparks action, colleges and universities need to respond by preparing future leaders and assisting communities and business with solutions. Student interns curate case studies, reports, presentations, and other information, often contributed by area professionals. This advances the body of knowledge needed for fast and accurate decisions by industry experts while enriching faculty coursework and nurturing emerging leaders. To access and help build this base of current, credible, and concise information. Visit the NRC's Resource Library at: https://library.nrcrecycles.org/ Project requirements: Specific duties will include editing and maintaining the National Recycling Coalitions Library website. In addition to website development, interns will conduct professional level communication with organizations and individuals, and update online databases and websites.
Supporting Documentation
National Recycling Coalition Library
For more information, e-mail: zerowaste@colorado.edu

Campus-Industry Research in Sustainable Materials Management

The University of Colorado and the National Recycling Coaltiion are surveying colleges and universities currently involved with, or interested in research pertaining to SMM. Results will be promoted nationally to increase sponsored-research opportunities.
Overview: Higher education has important, even decisive, roles in advancing Sustainable Materials Management. Research and Development Centers are forming around the country, and the world, working singularly or as a consortium; both geographically and sector-specific. The Campus Council and the University of Colorado are surveying colleges and universities currently involved with, or interested in research pertaining to SMM: Higher Education Research in SMM. Similarly, organization or

industry groups seeking research & development on a specific product or process can complete, the interest survey here or contact CampusCouncil@NRCrecycles.org to discuss sponsored-research opportunities.

Closed-Loop Film Plastics Project

Overview: Purchasing recycled products back from the same materials sent for recycling, directly decreases virgin material input and is a paramount of zero waste recycling. CU closes the loop on shrink wrap and other film plastics through this ongoing project that's ready for other institutional buyers. Many college campuses continue to throw away plastic bags, shrink-wraps, and other film plastics. Viable end markets exist yet cannot source or acquire enough secondary materials. One company, Petoskey Plastics, in Petoskey, Michigan, has partnered with CU and other schools to demonstrate the operational effectiveness of closed loop plastics.
Supporting Documentation
Association of Plastic Recyclers (APR) Case Study Grainger Brochure
Grainger Ordering Instructions
For more information, e-mail: zerowaste@colorado.edu

Campus Master Planning Project

Overview: CU-Boulder is undergoing a major review of its building codes and standards, many of which directly impact the success (or failure), of recycling systems on campus and throughout the built environment.
Green building industry associations and their certifications recognize the shortcomings of existing building codes and standards which inhibit successful recycling and composting programs. Design for recycling (DFR) is more important than ever for high building and occupant performance for materials management in the construction, occupation, maintenance, and decommissioning of the built environment. The American institute of architects has a challenge of input new level of green building. Additionally, the US Green Building Council (USGBC) has convened a collegiate task force to provide higher educations research focus.

Project requirements: This project is oriented to upper division design and engineering students. Students with experience or interest in LEED certification are encouraged. Project activities include becoming current with or knowledgeable with existing codes and standards at CU and in the industry, coordinating with CU's partnership for recycling and facilities planning departments to review and strengthen existing documents. Campus work will complement or will contribute to other AIA projects already underway nationally.

Supporting Documentation
Campus Recycling facility brochure and tour info
LEED Documentation
For more information to apply to advance this project, e-mail: zerowaste@colorado.edu

Extended Producer Responsibility (EPR) for Off-Campus Vendors Project

Student research is sought to assist campus procurement officials in revising contracts to complement Zero Waste programs.

Overview: Campuses like CU are frequently deluged with low-value, non-recyclable products , along with wasteful services- all of which contribute disproportionately to the campus waste stream. Campus cafes, laboratory equipment suppliers, privatized printing services are examples of off campus vendors targeted for process reform. Many campus vendors who have adopted zero waste practices have reported cost savings and market share / brand loyalty in the community. EPR, is a set of strategies campuses can use to reform and reward green vending practices. This project will initially look at disposable nitrile lab gloves as a case study in cooperation with CU and its contracted campus supplier. Project requirements: A variety of majors can apply for this project. General research into students interested in studying life cycle analysis, LCA, business product reform, as well as vendor campus relations are encouraged to apply.

Supporting Documentation

Advisory Statement on Nitrile Gloves to Kimberly Clark Corporation

For more information, e-mail: zerowaste@colorado.edu

Turning the Page on Paper Waste Project

CU worked with the AASHE and other colleges and universities to develop, test, and report on technical and educational campaigns to reduce paper use.

Overview: CU received a technical assistance grant from the Association for the Advancement of Sustainability and Higher Education (ASHE) to develop best practices for paper use at CU. This project involved interaction with 15 other colleges and universities to develop a guide book for national implementation. Project involved basic research into paper use and disposal patterns, the history of paper use and disposal, past and current practices at CU, and exploration of technical and behavioral alternatives.

Supporting Documentation

AASHE Turning the Page Report: Paper and Printer Reduction at CU-Boulder

For more information, e-mail: zerowaste@colorado.edu

Computers to Youth: Electronics Reuse for Colorado High School Students

Overview: CU's experience with redistributing computers for reuse dates to 2002, when the U.S. EPA funded the Environmental Center to develop opportunities across Colorado. Since then, CU has gained recognition for upcycling surplus computers to bridge the "digital divide", which exists when students are deprived of computer access to help them reach college. The CU Environmental Center proposes a multi-part Mobile Electronic Devise (MED) Recovery Campaign to meet these needs. Elements of the program to be planned include a new centralized collection system on campus, a bi-annual outreach effort to reclaim old phones, and redistribution of upcycled MEDs

through Computers to Youth 8.o. Project requirements: CU students are sought to develop the program as early as Spring semester 2020 through internships, volunteer and paid positions to learn and mentor basic IT for MED diagnosis and upgrading.
Supporting Documentation
Computers to Youth 8.0: A New Approach to Mobile Electronics Reuse
For more information, e-mail: zerowaste@colorado.edu