

Newsletter of the **Center for Sustainability and the Environment** at Wells College.



Abby McKenna '25, Environmental Science major and Sustainability minor, was selected to represent Wells at the *National Conference on Undergraduate Research*. Her research project titled "How Increases in Occurrences of Wildfires Pose a Significant Security Risk", was mentored by Professor of Biology and Environmental Science Jaclyn Schnurr in Spring 2023. Abby's independent student research project was funded under the auspices of the *Intelligence Community Center of Academic Excellence* program, overseen by History professor Leslie Schumacher. Abby and college representative Marian Brown will attend the NCUR conference in Long Beach, California, in April. 2024.

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Spring Semester Sustainability Events

We have a busy Spring semester programmed with a number of events and activities the Center is either hosting, collaborating on, or supporting in some way.

Sustainability Perspectives series virtual talks are held on Mondays, starting at 12:30PM. This speaker series invites in regional and national experts to help us explore sustainability-related topics from a variety of viewpoints.



February 12 **Plastics: Where Do They Come From and Where Do They Go?**

Macy Gustavus, microplastics researcher, speaker for *Beyond Plastics*

Plastic products seemingly make up the world around us, but do you know how they're made or where they end up after they're used? Ms. Gustavus will cover the basics of how plastics are made, what happens once they are discarded, their impacts on people and the environment, how we can make a difference, and everything in between.

Zoom #: **864 1528 9224** passcode: **Gz=5kgY8**

February 19 **Climate Change, Health, and Climate Smart Health Care**

Kristen Kaufman, Sustainability Strategy Manager, *Practice GreenHealth*

The health care sector accounts for 8.5% of all U.S. greenhouse-gas emissions, contributing to inequitable climate-related human health threats and natural disasters for which it bears the cost. Yet, as anchor institutions comprising 18% of the U.S. economy, health care systems have the potential to transform supply chains, drive sustainable practices, and build community health, wealth, and resilience. In this discussion, learn about the relationship between climate change and health and the vital role of health care in achieving a just transition to net-zero by 2050.

Zoom #: **812 5276 9675** passcode: **6PR=Rrk\$**



March 4 **Hazardous Chemicals in Consumer Products**

Sarah Briggs, Senior Research Specialist for Green Chemistry and Emerging Contaminants
New York State Pollution Prevention Institute (NYSP2I)

"BPA-free", "parabens and phthalates", "Safer Choice Certified", "forever chemicals", etc... The modern consumer is bombarded with a wide variety of complicated chemical information in the media and on product labels for things like personal care products and household cleaners. This presentation will discuss the current landscape of hazardous chemicals in consumer products, chemical ingredients of concern, how to navigate ingredient lists, common eco-labels and what they mean, and additional public resources for identifying products with safer chemical ingredients.

Zoom #: **833 1494 0917** passcode: **h*ZS\$&5f**

March 25 **But What Can I Do? From Reducing Your Carbon Footprint to Decarbonization**

Chris Carrick, Energy Programs Manager, *Central New York Regional Planning & Development Board*
When British Petroleum introduced the concept of reducing your own carbon footprint in 2004 as part of its "Beyond Petroleum" campaign, many criticized the company for using propaganda to deflect from its own role in maintaining our reliance on fossil fuels. More recently, however, individual behavior change has been seen to play a significant role in supporting and speeding systemic change. Mr. Carrick will discuss how consumer habits, lifestyle choices and civic engagement are essential tools in the global transition to a net zero economy.

Zoom #: **830 9341 5060** passcode: **DSfb?S9L**



April 1 **Looking beyond the label: examining dairy sustainability standards**

Keeley McGarr-O'Brien, agricultural sustainability researcher, *TEAGASC*

Increasingly, sustainability labels are being used on many of our food products, including dairy. These labels are awarded by certification standards, with a set of sustainability demands farmers must meet in order for their milk to be included in the standard. Due to consumer and legislative demands, new standards are frequently being introduced in the dairy sector. However, until now little research has been conducted to examine the sustainability claims or the organizations administering the standards. Keeley's research has tackled this topic, with interesting findings on the variability and the sustainability focus of dairy standards, and potential future developments for the sector.

Zoom #: **817 9257 4564** passcode: **X+K9RLrG**

Spring Semester Sustainability Events, continued on pg 4

Modified Sustainability-Related Courses

Faculty in various programs reviewed their programs and course offerings and made a number of changes that will be incorporated into future academic offerings. Among some of the relevant revisions noted:

ANTH 230 *Culture and Gardens* What is unique about the gardens of Tonga? Fiji? France? The course surveys the relation between culture and gardens as found globally. Local gardening practices—and a great diversity of plants—are studied in relation to forces of culture contact, colonialism, capitalism, globalization, and climate change.

ANTH 250 *Hawai'i: From Indigenous Settlement to the 21st Century* This course is an anthropological examination of the cultures and religions of Hawai'i, from indigenous settlement to pre-contact with the West to the 21st century. The course is organized around the themes of culture contact, colonialism, and globalization. Particular attention is paid to Hawaiian culture in relation to the effects of missions, sugar plantations, U.S. military presence, tourism, and climate change.

SUS 335 / PSY 335 *Environmental Psychology* How does alienation from nature impact mental health? This course explores themes in ecopsychology. Students will learn about therapeutic approaches to support clients with ecological grief, climate anxiety, and more. Students will also discuss cognitive barriers that inhibit environmental action and consider strategies for behavior change.

SOC 228 *Social Problems* What is the most significant problem facing our society? Who gets to decide? Whose interests matter, and whose interests are ignored? This course explores these important questions. Readings and discussions explore how some people's concerns are transformed into social problems. The course concludes by exploring what individuals can do to make social change.

SUS 101 *Introduction to Sustainability* Climate change, social injustice, and economic inequality are defining features of our time. How can we meet human needs on a finite planet? This class challenges the cultural stories that led to unsustainable development and showcases examples of communities addressing our most pressing global challenges at the local level.

SUS/FNIS 213 *Indigenous Environmental Activism and Resistance* Indigenous activists around the world are rejecting exploitative and colonizing perspectives and upholding the rights of nature. This course explores historical and contemporary examples of Indigenous environmental activism in defense of water, land, and non-human relations. Students will learn about Traditional Ecological Knowledge as a complement to Western science in addressing environmental problems and explore ways non-indigenous partners can be allies for environmental justice. The class includes service-learning at the Cayuga *SHARE* Farm (Strengthening Haudenosaunee-American Relations through Education).

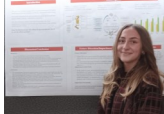
SUS / SOC 214 *Power, Privilege and the Environment* This course offers an in-depth introduction to themes in the social dimension of sustainability. Students will examine the ways systemic inequalities in the U.S. impact access to resources, participation in outdoor recreation, and protections from environmental harms. Students will explore the historical roots of mainstream U.S. environmentalism and analyze contemporary case studies illustrating leadership in communities hit hardest by environmental injustice.

SUS / PHIL 340 *Environmental Ethics* Do we have ethical responsibilities to leave a habitable world for future generations? Do we have moral obligations to the more-than-human world? This course introduces ethical frameworks from several cultural perspectives to guide environmental decision-making. Students will evaluate philosophical texts and wrestle with questions about how humans ought to live in a changing world.

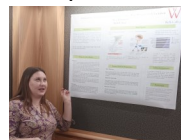
Student Sustainability-Related Presentations

Spotted at the Fall internship/research poster presentation, **Mary Pearl Echard '24** explained her summer/fall work as the Market Manager for the *Aurora Farmers Market*. She detailed her weekly market activities, including setting up and tearing down the market manager tent and marking out market vendor spaces and helping them set up their tents. She collected vendor payments weekly as well as organizing market events like musician performances and collections to donations to support local non-profits. MaryPearl indicated that, despite it being a lot of work, she really enjoyed her time as the market manager.

We noted two presentations with sustainability themes in the poster presentation by Health Science seniors. In her presentation titled "Chamomile's Benefits in Breastfeeding Mothers Who Struggle with Lactation", **Miah Williamson '24** researched the chemical properties of this common herb to function as a natural "galactagogue" to help increase the production of prolactin in the pituitary which stimulates the production of breast milk. **Julia Barnwell**



'24 followed her interest in personalized medicine and natural diet-based interventions in her extensive literature review of "The Influence of the Mediterranean Diet on the Human Gut Biome". Julia's research supported her contention that when the gut microbiome is well-nourished, gastrointestinal health outcomes improve. She encourages following a Mediterranean diet, with its emphasis on fresh fruits and vegetables, whole grains, fish and poultry, and limiting red meats, processed foods, and added sugars.



We were struck by the integration of sustainability considerations in the poster presentation by one team in HM 201 *Principles of Hospitality and Tourism*. This team, comprised of Business majors **Joe Kearns '27** and **Sarah VanVleck '27**, Sustainability major **Emily Greenfield '27**, and Hospitality Management major **"Q" Evans '25**, surveyed several resorts, restaurants, and hotels as well as airlines serving major destinations in Florida. Some suggestions for increasing resort sustainability included "installing solar panels, reducing waste, favoring cleaning products that are non-toxic and biodegradable, and reducing both energy and water consumption." The team noted the environmental impact of air travel, citing *Southwest Airline's* goal to become net-zero energy by 2050, with a near-term goal to save 50 million gallons of jet fuel by 2025. *Southwest* also plans to reduce single-use plastics on in-flight service. *American Airlines* also aims to reduce its consumption of jet fuel by 50 million gallons, significantly lessening its carbon footprint.



Metrus Year 4 M&V Report

We received our 4th year “Measurement and Verification” (abbreviated as “M&V”) report, detailing the performance to date of the various energy-conserving measures put in place in 2019 under our innovative ‘energy as a service’ contract with *Metrus Energy*. Using this novel financing approach, *Metrus* underwrote the costs of \$2.15M worth of building and energy system upgrades and we repay them over a period of years using the promised savings in utility costs they guaranteed we would realize each year. That is where the M&V process comes in—*Trane*, a third-party engineering firm checks our systems and our utility bills to be sure we are in fact realizing those energy savings. From *Metrus*’ report, in year 4, the ESA savings were 101.2% of the as-built expected savings, providing \$253,763 in total savings

(\$189,860 of realized energy savings and \$63,903 of operational savings). These upgrades saved us from purchasing 826 KW of electricity and reduced our natural gas consumption for building heating by 33,265 therms. Our carbon emissions were reduced by 667 metric tons of CO₂ equivalents—this equates to the savings shown in the report image (left). Among the specific energy-conserving measures implemented, the upgrade of our lighting to LED technologies has out-performed in actual savings (\$28,818) over the expected Year 4 savings of \$25,762. The *Building Automation System* (BAS) control integration came in about even with projected savings. The savings from tightening up and air sealing buildings (*Building Envelope Improvements*) was just about on the mark as well as were the energy savings from the extensive *Steam Trap* repairs and replacements.

Sustainability Achievements

Collectively across all measures, the Cayuga ESA reduced CO₂ emissions by **667 metric tons** this year. **594 metric tons** were saved from energy sources that directly reduce CO₂ emissions (Scope 1) & **73 metric tons** were saved from energy sources that indirectly reduce CO₂ emissions (Scope 2).

This is equivalent to...



The emissions from **84** American homes this year.



The emissions from **148** cars this year.



The emissions from the consumption of **1,543** barrels of oil.



The emissions sequestered by **11,029** tree seedlings grown for 10 years.

Paper Making Workshop

Mary Tasillo, director of the *Book Arts Center*, hosted a fun end-of-the-semester creative activity in Campbell Art Studio. During a community paper making and decorating workshop, participants created their own paper sheets made using cotton fibers recycled from industrial textile processes combined with leaf fiber harvested from *abaca*, a cousin to bananas. Once their sheets were finished, participants employed various artistic methods to customize their decoration of their paper.



2024 Wells College Seed Exchange Opens

In November, this year’s Seed Exchange intern **Delaney Beers** ’25 solicited seed donations from over 75 North American seed companies. Winter break was spent inventorying and organizing the thousands of donated seed packets we received in order to open in February. Our Seed Exchange will again be virtual, with an online inventory to select from and order forms to complete and email to us for fulfillment. At press time, our 2024 Seed Exchange will open with over 6,500 packets of flower, herb and vegetable seeds, with a face value of over \$16,450, all offered for free to gardeners and growers. Below: just the flower and herb seed packets.



E-Waste Collections

Dan Wentworth, director of *Information Technology*, provided us with the invoices from the three electronic waste collections this year to review. The IT department keeps a large Gaylord box in their area to amass broken or obsolete electronic gear: computers, monitors, TVs, laptops, tablets, servers, projectors, and related cables and peripherals (mice, keyboards, etc.) The contractor that IT uses, eWaste+ from Rochester, comes when that box is full and takes away these non-longer-needed pieces of equipment for proper disposal. In New York State, since 2015, “covered” electronic equipment (CEE) must be recycled by a certified contractor that guarantees to safely separate, dismantle or process the equipment for use or reuse in new products or components, ensuring that hazardous materials are not released into the environment or able to pose human health hazards. Computer hard drives are destroyed to ensure that no sensitive personal or college data is stolen. Over three collections, we sent out 4,278 pounds of “covered” electronic equipment for safe disposal, 2,107 pounds of miscellaneous electronic equipment (which don’t require such intensive processing), and 1,266 pounds of UPS, alkaline, and lead-acid batteries. 41 hard drives were destroyed.



That’s a Wrap!

Last Fall, we partnered with *Rubicon Technologies*, a leading plastics recycling company, for their *Trick or Trash*™ Halloween candy wrapper collection drive. We placed the printed cardboard collection container *Rubicon* provided to us in the 1st floor hallway of Zabriskie, which gets a lot of traffic. At the end of the collection period, we returned the bag of collected wrappers inside the postage-paid carton to *Rubicon* to be weighed and recycled. We accumulated a significant volume of wrappers but these puppies don’t weigh very much, so we didn’t divert a lot of weight from landfill trash. The collected candy wrappers we sent will be recycled into plastic resin pellets which can be used to make new, more durable and long-lasting plastic items, like park benches.





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Wells Center for
Sustainability and
the Environment

The Center for Sustainability was asked to donate a "Green Goodie Basket" for the silent auction fundraiser for *Christmas in Aurora*, which this year benefited the Peachtown School. These popular baskets contain various sustainable cleaning and personal care products. This time, we included woolen dryer balls and natural fertilizer pellets made with wool from Icelandic sheep locally raised on *Trinity Farm*, operated by retired biology professor Margaret Flowers. The retail value of this basket was \$150. The silent auction raised nearly \$3,000.



Sustainability is a decision-making framework for continuous improvement that mindfully takes into account the social, environmental, and economic impacts of our choices.

Spring Semester Sustainability Events, continued from page 1

April 15 Restoring Tree Cover in New York State

Gregg Sargis, Natural Climate Solutions Specialist, *The Nature Conservancy*

The Nature Conservancy is working to restore tree cover through tree planting projects in New York State to sequester and store carbon, improve water quality, and provide wildlife habitat. A pilot project was launched in the fall of 2023 where 1,700 trees were planted to serve as demonstration and testing ground for scaling up tree planting projects across the region. Zoom #: **893 1509 5575** passcode: **d!2kH6*3**



Our **Sustainable Business** speaker series is a collaboration between the Center for Sustainability and the Sullivan Center for Business and Entrepreneurships. Business leaders discuss their integration of sustainability thinking and practice in their organizations.

February 27 7:00PM Electronics Recycling and Distributed Energy Production in the Circular Economy

Steve Figgatt, founder and CEO, *Sycamore International*

Sycamore leverages sustainable business practices as a competitive advantage and to increase value capture. A primary tenet of their company is embracing the concept of a global circular economy, in which there is zero waste and all materials are reprocessed for reuse. Immense amounts of energy were invested in the production of electronics we all use. Preserving those assets and reusing those materials is more efficient and sustainable than mining and refining virgin materials. Steve will delve into this industry to explore solutions for responsible electronics recycling and some challenges the industry has faced. Sycamore applied their sustainable business philosophy to their electricity production, installing the first commercial solar microgrid coupled with an ESS Energy Warehouse Iron Flow battery on the planet. By pioneering the use of this system, they've made a viable business use case with a reasonable ROI for distributed energy production and long duration energy storage in industrial applications. These systems will help enable renewable energy to indeed serve as base load power as we decarbonize the grid across the United States. Steve will provide an overview of this system, the technology, the benefits over lithium batteries and general application for these systems. Zoom #: **874 2203 7433** passcode: **V.&zIH2**



At press time, we may still schedule another *Sustainable Business* presentation.

Sustainability Film screenings are held in Zabriskie Hall Room 106 at 7:00PM. Organic popcorn with organic butter is served.



February 20 Evolution Earth

At Earth's extremes, as the planet changes at superspeed, animals are reacting in surprising ways. With their homes changing all around them, we follow remarkable stories of resilience and hope you might not expect. From humpback whales to mountain butterflies, to shrinking marine iguanas, to ingenious savanna chimpanzees, animals are sending us a powerful and emotive message about our world. Runtime: 55 minutes

March 20 Regenerating Life

This documentary takes an ecological approach to unraveling the climate crisis.

The film proposes that it is humankind's relentless destruction of the natural world that has caused the climate crisis. Filmmaker John Feldman explores how life regulates the climate through photosynthesis and the carbon cycle; the water cycle; the dung cycle; and the vast interconnected soil network. He visits people who are working on solutions and looking for ways to repair the damage inflicted on the landscape. Runtime: 137 minutes



April 24 Do I Need This?

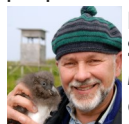
This documentary film is about consumerism, excess, and the stuff from which happiness is truly made. On the surface, this film is a joy ride through our excessive consumption habits, but at its core, it is a deep and genuine reflection on happiness and aging, materialism, and mortality. Runtime: 62 minutes

This spring, we are collaborating with the faculty coordinating the **Science Colloquium** series, held Fridays at 12:30PM in Stratton 209 and will host two sustainability-related presentations:

February 23 Wildlife Health and Disease Surveillance in New York State

Jennifer Bloodgood, DVM, New York State Wildlife Health Program

This presentation will give an overview of the *Cornell Wildlife Health Lab* and *New York State Wildlife Health Program*. We will go through case examples together and discuss ways that people can support wildlife health and mitigate threats.



March 1 50 Years of Lessons Learned from Project Puffin

Steven Kress, Former VP for Bird Conservation, *National Audubon Society*

Project Puffin has restored more than 1,000 puffin pairs to three Maine islands. Techniques developed during the project helped to restore rare and endangered seabirds worldwide.