

# SSAFE Newsletter

*Senior Stewards Acting for the Environment*



## *In This Issue*

### Reducing Single-Use Plastics on Campus



### Hotels for Insects?

How to construct and install a pollinator village.

### The Battery Technology Dilemma

Our need for better energy storage systems.

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*Cooling off on a hot summer day might be more than refreshing—it could be life-saving.*

## Hot! Hot ! Hot!

*By the Editorial Board in conjunction with Dr. Alan Lockwood, Kendal at Oberlin*

It's official: last year was the warmest year on record by far according to NOAA,\* which has been keeping records for 174 years. Until we contain fossil fuel emissions and bring them down to zero, we can only expect this trend toward hotter years to grow.

Global warming is happening here and now. With it come extreme weather events—more frequent and severe fires, floods, and storms. But not only that, it's presenting an array of health challenges that we will be facing for the foreseeable future.

*cont'd p.2*

## Hot (cont'd)

Dr. Alan Lockwood, a resident of Kendal at Oberlin, has been at the forefront of this public health emergency for many years. A member of Physicians for Social Responsibility, he is perhaps best known for his 2017 book, *Heat Advisory: Protecting Health on a Warming Planet*, but in addition, he has written an accessible and no-nonsense pamphlet (see sidebar) that directly speaks to the effects of extreme heat on the elderly. That would be us. “The year 2024 is certain to be the hottest on record,” he writes, pointing out that by the end of the century our efforts to lower the global temperature will be “disastrously short of the goal of 1.5° C called for by the United Nations.”

“...warming due to climate change will lead to more severe effects on health.”

—Dr. Alan Lockwood

How do rising temperatures affect health? We’ve heard about the deadly heat waves that have swept across parts of Europe, not to mention the extreme heat experienced in the southwestern U.S. for days on end last summer. But human beings can only survive within a limited range of temperatures. With greater heat and humidity come rising fatality rates.

According to the National Weather Service, deaths due to heat were far and away the leading cause of weather-related mortality in the United States in 2023. Heat caused more deaths than floods, tornadoes, and hurricanes combined.



Unfortunately, heat affects some people more than others. We seniors—those over 65 years of age—are at particular risk. Those of us who have medical conditions, especially cardiovascular disease on top of our advanced age, are even more vulnerable. To make matters worse, some medications, like those to lower blood pressure, can make us more susceptible to the harmful effects of elevated heat.

The socially vulnerable represent another group who are disproportionately affected by heat rise. Poverty and housing policies like redlining by mortgage lenders have confined primarily people of color to “urban heat islands.” In these areas the temperature is much higher than in surrounding rural areas, exacerbating heat-related illness and health inequity.

Dr. Lockwood and his colleagues monitor the health effects of heat on an ongoing basis, seeking remedies and ways to mitigate them. Cities, he recommends,

*cont'd p.3*



## Hot (cont'd)

should be designed and reengineered so they don't become "heat islands." Planting trees, grasses, and other greenery on roofs can reduce the need for air conditioning; white roofs that reflect heat can do the same.



Additional measures for an elderly population to stay cool include drinking lots of liquids, dressing lightly, and shading sunny windows in apartments or cottages. Community programs for regular check-ins, education campaigns, heat action plans, and advocacy for climate action policies are also essential to protect our vulnerable populations from extreme heat.



*Margaret Slosberg and Barclay Ward drink up at one of many hydration stations at Kendal at Hanover.*

At the end of the day, Dr. Lockwood delivers a clear mandate for action: "No

matter what decisions we will make as a civilization on our disorganized and occasionally contradictory paths toward the future," he writes, "we must curtail the emissions of greenhouse gases. Failure to do so will almost certainly lead to a climate legacy that none of us wants to leave for our children, grandchildren, and those who will follow."

The 2003 European heat wave was deadly! Read the stories of Monique and Petar, two 20-year residents of Paris who were among its elderly victims.

Authored by Dr. Alan Lockwood of Physicians for Social

Responsibility, this pamphlet vividly explores the toll heat can take on human health.

Download the pamphlet at <http://www.ssafef.org/health>



## For further reading...

The Heat Wave Scenario That Keeps Climate Scientists Up at Night:

<https://www.nytimes.com/2024/06/03/opinion/heat-technology-climate.html>

'New Territory' for Americans: Deadly Heat in the Workplace:

<https://www.nytimes.com/2024/05/25/climate/extreme-heat-biden-workplace.html>

\*NOAA National Centers for Environmental Information, Monthly Global Climate Report for Annual 2023, published online January 2024, retrieved on May 11, 2024 from <https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/202313>.

## ONE LONE VOICE, ONE ENORMOUS CHANGE

*By Bob Whitlock, Cartmel at Kendal-Crosslands Communities*

I decided to install a heat pump hot water heater (HPHWH) in my home in 2022 because of the significant energy savings HPHWHs can yield. They use less than 30%—some less than 20%—of the electricity required by traditional electrical resistance hot water heaters.

Many of the original conventional electric water heaters had a 60-gallon capacity and were EPA-rated to use an estimated 4,622 kWh of electricity per year. Based on our current electric company's rate of \$0.156 per kWh, it costs \$721/year to heat an average Cartmel unit. My new HPHWH is estimated by EPA to use 943 kWh/year, costing \$147/year. The resultant energy savings is 3,679 kWh or \$574/year. Our actual electricity usage was 632 kWh for the past year, or an average of 53 kWh per month.

I paid about \$1,700 for a 50-gallon Rheem Premium heat pump hot water heater, and installation cost an additional \$800. Our local electricity supplier offered a \$350 rebate, and that year the federal government allowed a \$1,000 tax credit, which has now increased to \$2,000 per household.

Early on I promoted the HPHWH within two Cartmel committees: Property and Sustainability. The Sustainability Committee was 100% supportive of this technology and instrumental in passing on detailed information to the administration—particularly Facilities Maintenance and Marketing. Moreover, the committee

made a formal request that they be made the default hot water heater option across all campuses and that Kendal-Crosslands Communities pay for their installation and maintenance. Meanwhile, as a member of the Property Committee, I had raised the subject there as well. Advantageously, the Director of Facilities Maintenance sat on this committee and offered to look into the pros and cons.

Among the pros of the HPHWH is the fact that it requires very little maintenance—air filter cleaning 2-3 times a year. Moreover, it may qualify for a tax credit or rebate. The anticipated lifespan of the HPHWH should equal or surpass that of the electrical resistance hot water heater by more than 10 years. It's important to realize that benefits can vary according to the number of residents in a unit and the amount of water used per day. And, of course, a HPHWH uses less energy and costs less money to operate.

The cons would include the high upfront cost and any noise generated when the heat pump is running. Because it emits cold air, it may have to be ducted to the outside. It also serves as a dehumidifier and requires a place for water discharge.

I was gratified to learn at a Property Committee meeting that my efforts and those of the Sustainability Committee had paid off. The Facilities Director announced that Kendal-Crosslands Communities had been looking for ways to reduce electricity usage, and as a result of the request from

*cont'd p.5*



## Lone Voice (cont'd)

the Sustainability Committee, they were happy to now install HPHWHs as standard operating equipment when traditional hot water heaters needed replacement in units where residents were amenable.

Overall this process took several months—perhaps the better part of a year. But we were successful in the end, convincing the powers that be to support a policy that would save energy and reduce costs over time. Individual initiative plus committee support *can* result in organizational change.



*A heat pump hot water heater can save substantial energy and money.*

## Education Corner

### 2040

#### Back to the Future: Climate Change Revisited

What will life be like for a child who will enter their twenties in the year 2040? In this film a father contemplates a future world altered by climate change and embarks on a journey to explore sustainable solutions to the climate crisis that are either available now or could realistically contribute to reversing climate change in the future.



Rooftop solar is now being used to produce microgrids, allowing communities to trade their own energy. Modifications in transportation like self-driving cars and ride-sharing are enhancing mobility and promoting more livable cities. Regenerative agriculture now reduces greenhouse gas emissions. Plant-based diets reduce methane. Seaweed harvesting sequesters carbon while increasing food security. Education of women and girls can enable them to make choices about birth control to reduce population growth.

For an uplifting, solutions-based approach to the climate crisis, you'll want to watch this film: <https://www.youtube.com/watch?v=-rNRbASnuc4>

## A SSAFE WORKSHOP TACKLES SINGLE-USE PLASTIC

By 20 SSAFE Chapter Residents

On May 17th, 20 residents of various SSAFE Chapters gathered on Zoom to discuss what could be done to lessen the plastic burden on our campuses. Several common themes came out of the workshop, as well as a number of practical recommendations to address them.

### “Bring your own covered cup to Cup”

- A program at Wake Robin, this is perhaps one of the most innovative approaches to lowering plastic use. According to the BYOCC 5,000 challenge, if 100 residents bring their own reusable cup to “Cup” (a weekly social gathering) for 1 year, 5,000 paper cups could be saved from the landfill. Other follow-on suggestions:
  - Maybe there should be a charge for disposable cups?
  - Maybe hang a pegboard, labeled by unit number, where residents can hang their personal cups?

### Get rid of those plastic bottles!

- There was near universal consensus that the plastic that housed bottled beverages needed to be replaced with cardboard, aluminum cans, or glass. Some thoughts on how to accomplish this:
  - Switch to vendors who provide beverages in non-plastic containers.
  - Distribute refillable water bottles to staff.
  - Assure water fountains have refill stations where stainless steel water bottles can be filled.



*An innovative program at Wake Robin aims to keep 5,000 cups out of the landfill.*

### Encourage plastic-free dining areas

- Use glass and porcelain dishware in dining areas.
- Substitute metal, bamboo, or plant-based compostable flatware for plastic utensils in cafes and at events.
- Place reusable takeout bags near the check-out counters—“donate one or take one.”
- At Collington, residents can wash and reuse plastic clamshells (unfortunately, this is not permissible at all campuses).

### Participate in the TREX challenge

- Collect plastic film from pallet deliveries and deposit it at a local grocery store that participates in the TREX program. That plastic can be turned into useful products like decking and benches.

*cont'd p.7*

## Plastic (cont'd)

### Change daily living habits

- Consider laundry soap strips to avoid use of liquid detergent in plastic jugs.
- Look for nearby “refill stores” where you can use the same container to replenish such things as dish soap, shampoo, detergent, and cleaning products.

### Look for help from your administration

- Advocate for a composting service.
- Develop hiring criteria in conjunction with HR to bring on staff who have a “green sensibility.”

### Educate, educate, educate—and then repeat

- Make sure there’s a how-to-reduce-plastic section in the material given to new residents.
- Show films on the dangers of plastic. Collington will be including “The Story of Plastic”—a classic—as part of their ongoing environmental film festival.

Do you have additional ideas for reducing plastics? Send them to [info@SSAFE.org](mailto:info@SSAFE.org) and we’ll include them in our next issue.



## Who Pays for our Dining Service Disposables?

An important factor discussed in the workshop was the externalization of the costs for our dining services, which was brought up by George Kriebel from Lathrop North. Externalization refers to those costs of a product or activity that are borne by society as a whole, often in the form of harm to human health, rather than by the entity that is producing or initiating them.

Applied to dining services, that means that the cost of disposable cups, flatware, takeout containers, and other plastic items are externalized to society. Plastic manufacturers are not held accountable for these costs. It is human beings who bear the brunt of their harm.

The costs of these disposable items, often cheaper than the alternatives, are internalized or borne by dining services, but their negative impacts—the microplastics and nanoplastics released in their degradation—are externalized, affecting everyone. The cost of collecting, washing, and storing reusable china and silver suffers in comparison, making the choice to use disposables an easy one.

Yes, we all pay for this. And we are the only ones who can do something about it.



## A POLLINATOR VILLAGE GIVES INSECTS A HOME

by Larry Litten, Piper Shores

Insects play an essential role in the pollination, and therefore the well-being, of our fruits, vegetables, and flowers. Thus, they play a critical role also in humanity's well-being. Unfortunately, the welfare of our insect populations is threatened by human development that destroys or compromises their habitat, sometimes in the name of just tidying things up for “aesthetic” reasons.

We can provide help to these important members of our ecosystem, however, in the form of insect hotels—structures for insects that are similar to bird houses for birds. According to Wikipedia, “The introduction of insect hotels into a habitat provides valuable housing for beneficial insects. Impacts can be seen in the form of better soil quality, increased pollination, elevated ecosystem diversity, and reductions in the populations of detrimental insects.” These structures can also afford an opportunity for residents to participate in a rewarding craft project, publicity for the wood shop, and creation of an artistic installation on campus that becomes a beloved attraction.

In 2022, members of the Piper Shores wood shop created a cluster of insect hotels on a beam, which we chose to call a “pollinator village” (on the assumption that people are more comfortable with the concept of pollinators than they tend to be with insects). This pollinator village was modeled on a structure created by a resident in the garden at his previous residence, which in turn was inspired by a

structure that an artist made for the wall of a settlement house in England. Interested wood shop members were invited to a meeting where the principles of insect hotel construction and placement were discussed, and examples of such structures were shown (all the shared materials were gathered from the Internet).



*The pollinator village stands among flowers in a sunny location.*

Each Piper Shores hotel was designed and constructed independently by eight members of the wood shop. They represent a wide variety of approaches—several consist of holes of various diameters drilled into blocks of wood; others contain bamboo, beach grass, and even toilet paper tubes filled with stems of the ever advancing invasive, *Phragmites*. The hotel village was installed by the Facilities Department in a campus flower bed. A major challenge was finding an area with sufficient sun, the preferred southeast orientation, plenty of flowers, and free of the rock ledge that abounds on the Piper Shores campus.

*cont'd p.9*



## Village (cont'd)

The existing structure has been only moderately successful in attracting insect residents in its first two years. It has, however, focused attention on the importance of insects in maintaining a healthy environment and increased awareness of the difference between social and solitary bees. The Piper Shores CEO was sufficiently taken with the structure that he instructed the wood shop to order lumber for another. Wood shop members from the recently opened Piper Shores expansion campus were invited this spring to design and build this second village for their campus. In addition, a resident from the community that abuts Piper Shores ordered three individual hotels from the wood shop to give as gifts in return for a contribution to the shop.



*Wood shop members Bob Sax, Don Salvatore, and Jeff Beuttell as well as five others volunteered to build the pollinator village.*

For people who are interested, the Internet is replete with discussions and examples of insect hotels. A great place to start is the Wikipedia article on “insect hotels.”

## Advocacy Corner

### Every Vote Counts

As we approach the November general election, the importance of turning out the environmental vote is critical. The recently passed Inflation Reduction Act (IRA) is the largest investment in reducing carbon pollution in U.S. history—an investment in serious danger of being gutted in November.

In battleground states and districts, a small margin of voters have the power to influence the direction of our country’s environmental policies. According to Environmental Voter Project (EVP), there are 13 million environmentalists who don’t vote. By using an evidence-based approach to encourage low-propensity voters to register and vote, such as phone banking, postcard writing, and canvassing, EVP has been able to transform 1.8 million nonvoters into what they call “super voters.”

Other organizations such as Center for Common Ground, Third Act, and Citizens’ Climate Lobby offer ways to take action where it matters most in terms of climate change. Your community may already have resident-organized voter turnout efforts planned this year.

SSAFE encourages you to participate in voter turnout efforts and ensure that climate change remains at the forefront of our political discourse.

To learn more visit these resources:

[www.environmentalvoter.org](http://www.environmentalvoter.org)

[www.centerforcommonground.org](http://www.centerforcommonground.org)

[www.thirdact.org](http://www.thirdact.org)

[www.cclusa.org](http://www.cclusa.org)

## A GLIMPSE AT AN ENVIRONMENTALLY FRIENDLY FIBER

*By Lenice Hirschberger, Wake Robin*

Elizabeth Ungar's fine piece on sustainable clothing in the January 2024 issue of the SSAFE newsletter did an excellent job of addressing our environmental concerns as buyers and in some cases, makers of apparel. Even our renewable sources like cotton, wool, hemp, and linen are fraught with processing problems like toxic solvents and high energy and water use. And it's no secret that synthetics like nylon, polyester, and spandex are born of petrochemicals.

As a weaver, I would like to add to the discussion that class of man-made fibers that come from wood, one of our most renewable resources. These are the cellulose-based products like rayon and lyocell made from wood pulp dissolved in a solvent and pressed through a shower-head type of device to make fibers which are spun into yarn.



*An example of TENCEL™ fibers on a loom.  
Credit: JechapmanWeaves on Etsy*

Among them is a shining light that weavers have been in love with for years: TENCEL™ branded lyocell fibers by Lenzing AG of Austria. The use of these relatively new fibers has been heralded as a milestone in the development of environmentally sustainable textiles. Weavers love the fabrics made from them

for their softness and silky drape, relative wrinkle resistance, ease of dying, and durability. TENCEL™ fibers have several features that account for their high reputation with environmentalists. First, they're made from organic sources—certified, sustainably managed plantations of primarily birch, beech, spruce, and eucalyptus. Second, the solvent used to digest the wood pulp is non-toxic amine oxide, as opposed to the more toxic solvents used to produce rayon—also a cellulose-based fiber. Furthermore, production of these fibers involves a closed loop manufacturing process in which over 99% of the water and solvents are recovered and recycled time and time again. Finally, TENCEL™ fibers are compostable and biodegradable. It usually takes only eight days in waste treatment plants for them to degrade.

While we can praise the production of TENCEL™ fibers as environmentally friendly, it has to be recognized that some potentially harsh or toxic chemicals may be used in dyes and in the manufacture of fabric and garments. TENCEL™ fibers also get mixed with other fibers, causing them to lose some of their environmental edge.

Nothing guarantees that clothing made from TENCEL™ fibers is healthy for chemically sensitive skin, but we have every reason to share the enthusiasm of the environmental press and welcome these fibers to our discussions—and maybe our closets.

TENCEL™ is a trademark of Lenzing AG.

*By Ben James, Kendal-Crosslands Communities*

The world's scientific community agrees that we need to be weaned from fossil fuel by 2050. Fortunately, alternative energy sources—solar and wind—are thriving, and their costs are now competitive with traditional power plants.

But while traditional fuels supply consistent energy, these two technologies fluctuate; the sun doesn't shine at night and wind varies. Moreover, our greatest demand is for heating and air conditioning, and demand for the former is greatest on early winter mornings, while cooling demand rises toward late summer afternoons. To smooth these fluctuations, we need energy storage systems that are cost-effective, safe, readily available without environmental destruction, and durable for the long run.

What, then, are our choices?

**Pumped hydro** is a type of hydroelectric energy storage in which water is held in two reservoirs. It is pumped up to an elevated water reservoir during periods of low demand; then when demand rises, the water falls back to the lower reservoir, generating electricity in the process. However, this type of storage facility requires significant space, and the number of suitable locations is limited.

**Lithium-ion batteries** have been the solution for electronics and electric vehicles because of the power they can pack into a small, lightweight package. However, when they are overheated, they may burn uncontrollably. And, lithium may not be readily available in the

quantities we need for the future.

Moreover, some lithium-ion batteries contain cobalt, which requires intensive mining that releases toxic substances and pollutes the environment.

**High pressure hydrogen** gas can be a functional storage solution. It utilizes hydrolysis to generate the gas from water first and then hydrogen fuel cells to return it to water. But hydrogen is not an easy gas to manage—it's hard to contain and loves to combine with oxygen explosively.

**Other chemistries** based on inorganic elements are being explored, such as bromine/zinc, iron/air, lead acid, and nickel/iron. These are safer to use but much bulkier, with limited lives.

**Flow batteries** combine a chemical approach with bulk storage. A positively charged tank of liquid and a negatively charged one meet at a central membrane where electrons flow into an external circuit, generating power. These batteries have been demonstrated to show promise, and both inorganic and organic chemistries are being explored.

We are at the point where we have the technology for power generation but don't yet have a viable scheme for energy storage. As research and development continues, which of these or others will prevail? Lithium-based batteries may well be the near-term choice, but others may surpass them eventually. Lifetime cost, safety, environmental gentleness, reliability, and ease of manufacture will all be part of the equation.



# Wrapping Up

## Our Readers Respond

In response to the article “The Energy Toll of Using Space Heaters” in our January 2024 issue, Daphne Stevens from Lathrop North wrote:

“I’ve been a climate activist for 44 years, and I use space heaters at times because I prefer not to use gas. We have two mini-splits that are on all winter. We will occasionally use an electric space heater when we are in our large room that has an open area under a soaring ceiling. When the sun isn’t shining, it can get chilly. We wear layers of clothes and use lap robes when sitting on the couch or recliner, so we don’t use the space heaters for long—just long enough for them to serve their purpose.”

## Success Stories

The SSAFE Newsletter Team is on the lookout for success stories. Do you see sustainability projects or good ideas worth sharing at your campus?

Send details to [info@ssafe.org](mailto:info@ssafe.org) for consideration in the next issue!



## Donate Today!

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SSAFE uses these funds to support efforts such as guiding senior living campuses to net-zero emissions, climate advocacy, and climate education. Senior Stewards Acting for the Environment (SSAFE) is a 501(c)(3) nonprofit corporation. EIN: 87-1229514.

## Newsletters on the Go!

“Whenever I pack my suitcase, I toss in a few copies of the SSAFE newsletter—most recently for a college reunion, and always at Christmas. I enjoy handing them out to friends and family who invariably tell me how interesting the articles are and how professional the newsletter looks. Who knows what happens to those copies next? They could find their way to a prospective new member of SSAFE or a person who would like to make a donation, or just another person who might learn something new about climate change.”

Barbara Scott Nelson, Kendal at Hanover

## SSAFE Newsletter

This newsletter is a publication of SSAFE, a non-profit organization started by residents from Kendal senior living communities. SSAFE has no official affiliation with the Kendal Corporation.

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## Submissions & Comments

We want your feedback! We’re always looking for good stories to provide inspiration to other senior living community residents. Send us your articles, ideas, questions, or comments!

We’d love to hear from you—drop us an email at [info@SSAFE.org](mailto:info@SSAFE.org)