SSAFE Newsletter

Senior Stewards Acting for the Environment

In This Issue

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Methane flaring is the intentional burning of excess natural gas at processing facilities. Photo Source: Adobe Stock.

Tackling Methane—A Highly Potent Greenhouse Gas

By Mike Burke, Collington, a Kendal Affiliate

While carbon dioxide emissions are the largest source of greenhouse gas emissions in the United States and in the world, methane—the main component of natural gas—is the second largest source. But methane is an extremely potent greenhouse gas, trapping 80 times more heat than carbon dioxide in its first 20 years in the atmosphere. (After 20 years, methane degrades at a rapid rate, unlike CO2, which can last for centuries.)

cont'd p.2

Methane (cont'd)

Earlier this year, two reports pointed out the importance of controlling methane emissions in the battle against global warming.

- According to the National Oceanic and Atmospheric Administration (NOAA), global methane emissions soared by a record amount in 2021. NOAA said, *"Atmospheric methane measured jumped 17 parts per billion (ppb) in 2021, the largest since systematic measurements began in 1983."*

- Startlingly large amounts of methane are leaking from wells and pipelines in New Mexico, according to a new analysis of aerial data, suggesting that the oil and gas industry may be contributing more to climate change than was previously known. The study by researchers at Stanford University estimates that oil and gas operations in New Mexico's Permian Basin are releasing 194 metric tons *PER HOUR* of methane. That is more than six times as much as the latest estimate from the Environmental Protection Agency. (EPA)

Of the estimated 435,000 miles of U.S. onshore pipelines, only 11,569 miles (less than 3%) are currently subject to federal leak survey standards. Is it any wonder that EPA's estimates are so erroneous?

Leaking pipes aren't the only culprits. Methane is often released on purpose through "venting," to control pressure in pipelines, or "flaring," the intentional burning of excess natural gas at processing facilities.

There are over 1 million active wells in the United States. New Mexico has fewer than 30,000. The largest number of wells are in Texas. Over much of the last decade, oil and gas operators in Texas and a dozen other U.S. states have flared at least 3.5 trillion cubic feet of natural gas, according to an analysis of satellite data by Arizona State University. That's the greenhouse gas emissions equivalent of nearly 42 million cars driving for a year. The industry has also directly released unknown amounts of gas into the atmosphere through venting.

"SSAFE has called upon the Biden Administration to take swift action...."

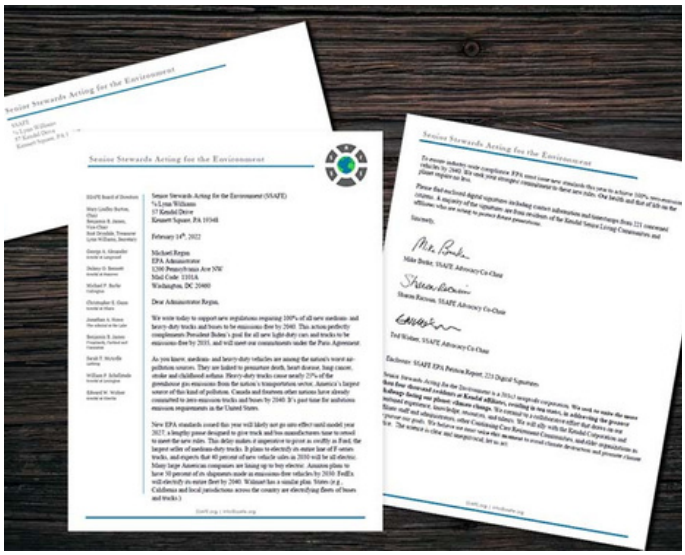
In the 18 months since the United Nation's COP26 summit in Glasgow, President Biden and the leaders of 100 other nations agreed to cut methane emissions 30 percent by 2030. This Global Methane Pledge is a key policy needed to hold warming to below 2 degrees centigrade by mid-century. Focusing on methane will give governments the chance to meet near-term climate goals while buying time to tackle carbon dioxide emissions by building out renewable energy capacity.

Several states (notably, New Mexico) are taking steps to outlaw flaring, a completely unnecessary and wasteful shortcut taken by energy companies.

cont'd p.3

Methane (cont'd)

The federal government has the authority —and the responsibility—to require oil and gas companies to identify and eliminate pipeline and processing facility leaks. SSAFE has called upon the Biden Administration to take swift action to improve leak detection monitoring and to require gas operators to take immediate remedial actions. More than 250 signatures calling on the administration to act with the speed the crisis requires were collected.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The SSAFE letter to Tristan Brown, Acting Administrator for the Pipeline and Hazardous Materials Safety Administration (PHMSA), included 250 signatures.

We know that slashing methane emissions will help us reach our ambitious goal of a 50% reduction in greenhouse emissions by 2030 and put us on track to achieve net neutral emissions by 2050. We also know how to achieve these reductions inexpensively.

Let's get on with it!

What can I do?

- Gas stoves continuously leak small amounts of methane. The better choice is an electric range.
- The same holds true for hot water heaters. Time to go electric.
- Ditch the gas fireplace.
- That goes for the gas grill as well.
- Work with your Administration to switch to an all-electric campus. Sign an agreement with your electricity supplier to provide your campus with 100% renewable electricity.
- And be sure you are working with your state public utility commission and legislature to turn the electricity grid green (all renewable or nuclear energy sources).

To find out more about methane, go to...

Increase in atmospheric methane set another record during 2021 | National Oceanic and Atmospheric Administration: https://www.noaa.gov/news-release/increase-in-atmospheric-methane-set-another-record-during-2021

Overview of Greenhouse Gases | US EPA: https://www.epa.gov/ghgemissions/overview-greenhouse-gases

Methane Leaks Plague New Mexico Oil and Gas Wells - The New York Times: https://www.nytimes.com/2022/03/24/climate/methane-leaks-new-mexico.html

WHY DOES "FOREST BATHING" MATTER?

By Larry Daloz, Kendal at Hanover

Cardinal is back. His liquid bubbling pours through our open window this morning with the sun: “Birdie? Birdie? Birdie?” he calls. Days like this draw me out, across the road, into the hillside forest of hemlock, oak, white pine. The trail springs under my feet as I climb; Hemlock’s moist, tangy breath fills the morning air; Chickadee bops over to check me out. I stop, place my hand on Oak’s massive trunk, feel the solid reliability, smile from inside out. Taking in the chunks of lichen-splashed granite on the slope, the mossy rotting stumps, the ostrich ferns just pushing up their fiddleheads, the miniature forest of princess pine, I kneel down to greet a mat of feather moss and breathe in the sweet, musty earth. Then I find a soft spot. Sit down. Far and away, Raven yelps three times. The things of the world fall away.

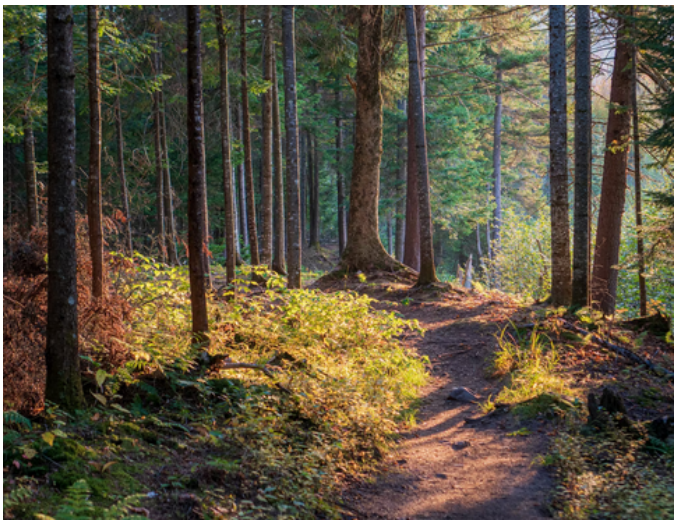

Photo Source: Lucas Parker on Unsplash.

Though I’ve been taking walks like this much of my life, now there’s a word for it —"forest bathing,” the Japanese call it. It’s not about “getting exercise” as we Westerners would have it. Rather, it’s about exercising our inner lives —one might even call it our spirits. It is a way of connecting directly through our senses to the “more-than-human-world.” If this sounds perilously close to tree-hugging, it is. But scientists have demonstrated conclusively that it makes a very real difference, refreshing our energy, perking up our mood, restoring our souls. If you’re not sure, sometime when no one is watching, give a hefty tree a good hug. You’ll see.

Yet over half the world’s population now lives in cities, and within another generation, two-thirds will. Americans average only 10% of their time outdoors, and far less than that actually in a forest. What does it mean for forests if most of us only know them as foreign, expendable, or even frightening? And why does this matter? Well, here’s another new term: “ecosystem services.” We have always taken the natural world for granted: we dam its rivers, foul its oceans, scar its land, pollute its air—and rarely a farthing do we repay it for what it gives us free. Trees turn carbon dioxide into organic material, storing it in the ground and releasing the oxygen for us to breathe. Forests prevent erosion and filter rainfall, restoring it back into clouds. They moderate the sun’s heat, keeping the soil cool and moist, providing habitat for the vast majority of land-based critters. And, lest we forget, trees provide the material from which most of us build our homes. Take away our forests, and we would disappear like an ice cube on a hot skillet.

cont'd p.5

Forests (cont'd)

But that's what's happening. Before humans invented agriculture, forests covered well over half the land; now less than a third remains. Globally, we are losing a billion acres of forest a year to logging and agriculture as well as climate-related fires and pests. The Amazon rain forest has shrunk by 20% since 1970, and the planet's largest forest, the Boreal, which circles the northern polar region, has declined by 6% since 2000. And yet, even as we are cutting these forests down, we need their services more than ever to absorb the massive amounts of C02 that we continue to pump into the air. It's a vicious circle: land cleared by logging gets hotter, this leads to drought, adjacent trees burn and release CO2 into the atmosphere, which traps more heat, killing more trees that no longer absorb CO2, and on and on.

Trees turn carbon dioxide into organic material, storing it in the ground and releasing the oxygen for us to breathe.

What can we do to stop this? First, we can buy carbon offsets for reforestation, and contribute to organizations committed to saving forests, especially the Boreal forest. We can support political candidates who acknowledge the United Nations-backed pledge to stop global deforestation by 2030. On a more personal level, consider joining the growing movement to assist tree migration by joining efforts to plant

A mossy hillock beckons deep in the forest.

in more sustainable ways that account for warming climates as folks at several of our Kendals are doing right now.

And at the end of the day, remember that we will always care for what we love. So dip into a forest near you. Find yourself a spot near a tree or two and take a moment just to be grateful for all we receive from the trees. Then decide what you will do to thank them. You'll be returning the favor —not only to the trees, but to yourself and all of us.

For reforestation carbon offsets:
https://carbonfund.org/project_category/forestry/

For climate-sensitive plantings:
https://homegrownnationalpark.org/tallamys-hub-1

For assisted tree migration:
https://en.wikipedia.org/wiki/Assisted_migration_of_forests_in_North_America

https://thegreatstory.org/climate-trees-legacy.html

Over recent years, a cadre of committed Lathrop residents have transformed the campus into a model of land restoration and preservation. Here are three stories of how they are literally changing the face of the earth.

How to Nurture Birds and Butterflies

By Barbara Walvoord, Chair, Woods & Fields Committee, Kendal at Lathrop (Easthampton)

A chickadee needs 6,000 caterpillars to raise one nestful of young, Dr. Douglas Tallamy reports in his brilliant book, *Bringing Nature Home* (https://homegrownnationalpark.org/tallamys-hub-1). Where can birds find these caterpillars? Why, on the native plants with which they evolved. Most caterpillars eat only native plants. Therefore, when we plant for beauty, color, shape, or insect-free growth, we introduce alien and hybrid trees, shrubs, and perennials. Like mowed lawns, these plantings offer little support for wildlife. The arithmetic is chilling. Wildlife is reduced by up to 75% in areas dominated by non-native plants rather than those populated with natives.

As our natural world faces the interconnected dangers of climate change and loss of biodiversity, Lathrop residents work to repel invasive non-natives and restore the health of our campus settings.

We are part of a national movement: our campus contributes to Tallamy's efforts to create a "national park" of connected backyards that protect wildlife. Our Lathrop fields and gardens are part of the "save the monarchs" initiative. We invited school children to come to our meadows to plant native milkweed, the only plant the monarch larvae can eat. Residents have added either swamp milkweed or butterfly milkweed to their gardens and then watched, and photographed, the cocoons and the monarchs that emerged.

In one small wooded glade, residents removed the non-native, invasive shrubs and vines that were choking the natives. Then they planted a dozen native shrubs to support butterflies and birds.

Residents plant native shrubs, which will eventually shade out the grass, in an area of lawn that could become a low-maintenance bird and butterfly sanctuary.

In another spot, residents turned an area of mowed grass into a bird and butterfly sanctuary. They planted native shrubs right into the grass at 6- to 10-foot intervals. The grass will grow up between them until the shrubs get big enough to crowd it out. A sign tells visitors that this area is composed of native plants growing without the use of pesticides, to help nurture birds and butterflies.

cont'd p.7

Lathrop (cont'd)

The Critical Importance of Native Plants

By Mary Alice Wilson, Chair, Native Plant Group, Kendal at Lathrop (Northampton)

In 2013 residents at Kendal at Lathrop (KaL) organized the Land Conservation Committee (LCC). Their efforts increased wildlife and biodiversity and gave residents an active role in protecting their environment.

Over the years, working groups formed within LCC. In 2020, the Native Plant Group was formed in order to educate residents and others about native plants. The group focused on the value of native plants to pollinators; the protocol to follow when selecting and planting; their vital role in reducing the impact of climate change and the loss of biodiversity; and their beauty.

Among their successful projects, they:

- Identified and labeled native plants along the north campus Loop Trail. Prepared a more extensive list with both common and scientific names, making the list available in print and on the two Lathrop websites. By next year resident's photographs will be incorporated into the plant list.

- Prepared *Recommended Native Plants for Lathrop Cottage Gardens* that included both growing conditions and each plant's contribution to pollinators or as a host plant for butterfly and moth larvae.

Sign to help residents identify native plants along the Loop Trail.

- Identified useful books about native plants, adding them both to the *Books and Websites about Native Plants* and to the native plant collections in the libraries on both campuses.

- Identified websites with valuable resources about native plants.

- Engaged in community activities such as native plant exchanges; displays at Lathrop craft fairs; and articles in the weekly newsletter about which plants are currently blooming and where to find them.

In its 2 years of operation, the Native Plant Group has benefited from the support of the Lathrop community and from the unanticipated support of the larger community, especially the books, website, and videos of Dr. Doug Tallamy (see previous link, page 6) and the almost constant media coverage about the growing interest in native plants and their contribution to our fragile world.

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Lathrop (cont'd)

Conserving Land

By Kamala Brush, Vice-President of the Easthampton Residents' Association, Kendal at Lathrop

KaL's newest Conservation Restriction (CR), which protects 78 acres on our Easthampton campus, was decades in the making and brought together Lathrop (residents, management, and board), public officials, and Kestrel Land Trust (a local non-profit that provides support in conserving and caring for land) in a shared commitment to conservation. A hard-working team of residents met diligently dozens of times over many months and collectively spent hundreds of hours in service to this complex process.

The CR protects the land in perpetuity and minimizes development's adverse environmental effects in many ways.

Permanent protection helps to conserve the rural, agricultural, and natural character of Easthampton. The CR creates a critical link within a large swath of already protected open space, the largest area of contiguous agricultural land in our town. The site's 20 acres of open fields are classified federally as prime farmland and by the state in the two highest categories of farmland.

There are also 50 acres of forestland, most of which have been cleared of invasive plants and which are regenerating with native trees, shrubs, and flowering plants. The forest, which includes three state-certified vernal pools, intermingles with meadows and wetlands, and provides wildlife corridors and a rich habitat for wildlife.

This property is within the recharge area of an important acquifer which supplies drinking water to over 60,000 people. Protection of surface area from development and pollution is critical to maintaining this public drinking water supply. In addition, retaining the natural values of this riparian corridor helps maintain water quality through buffering, filtration, and reduction of non-point source pollutants.

Lathrop has now permanently protected a total of 104 acres of forest, meadows, and wetlands. To find out more in your state, in addition to state and local government sites, land trusts and conservation organizations are a good source of information.

View of Lathrop townhomes from forestland and meadow protected through the conservation restriction.

A Managed Landscape Free of Herbicides*

An Interview with Charlie Clapper, Collington, a Kendal Affiliate

Charlie Clapper, Chair of the Resident Grounds Committee, working closely with the Climate Action Committee, has spearheaded the effort to reduce herbicide use on campus. In 2020 an educational initiative began to make the community aware that pesticides are damaging chemicals that kill insects—an essential food for birds. With help from Collington's landscape contractor, the committee developed a plan to care for turf and control weeds without the use of herbicides. The plan went into effect in 2021, and as the implementation is now entering year 2, the results are promising. There is more clover and other weeds, including dandelions, but the residents seem happy with this. The committee is also trying to reduce the amount of turf and the extent of mowed grassy areas in general, to help mitigate the problem. The work of the Resident Grounds Committee has yielded demonstrable success now, and this success can only grow as future opportunities present themselves.

Photo Source: Ray Hennessy on Unsplash.

A Program to Protect the Land from Pesticides*

An Interview with Hazel Gunn, Kendal at Ithaca

Hazel Gunn, Chair of the Sustainability Committee, was inspired by one of the speakers in their ongoing series. A Cornell professor spoke about how important it is to avoid the use of pesticides because they kill the insects necessary for bird survival. As a result, the committee lobbied the administration, which agreed to a pause in pesticide use as of the spring of 2022, with the caveat that they would assess the results. Simultaneously the committee got agreement to reduce the amount of mowed lawn in general, so there would be less pesticide use as lawn naturally converted into meadow. With the help of Cornell interns and a consultant from Cornell Cooperative Extension, the committee is in the process of installing demonstration pollinator gardens, rain gardens, wildflower gardens, and ground cover so residents can see what things would look like without so much grass. Thanks to the persistence of the Sustainability Committee, Kendal at Ithaca has taken a big leap forward in protecting the land from dangerous chemicals and protecting the wildlife that thrives on natural landscapes.

**Pesticides include chemicals to kill insects, herbicides to kill weeds, and fungicides to control fungal disease.*

The LED Light Bulb Initiative at Kendal at Hanover

By Arthur Holcombe, Kendal at Hanover

Many residents at Kendal at Hanover (KaH) are concerned about the increasing number of climate catastrophes each year in the United States and the world, including forest fires, heat waves, droughts, floods, famines, and sea rise. They see it as the responsibility of everyone to take actions that can help to head off what otherwise could be an uninhabitable world for future generations.

The LED light bulb initiative at KaH was intended to help reduce the carbon emissions footprint from residence lighting and at the same time reduce Kendal's annual electricity consumption expenses. It works by helping residents to identify florescent and incandescent light bulbs that can be replaced by substantially more efficient LED light bulbs offering comparable lighting. Under the arrangement, the Facilities Department provides 60-watt LED replacement light bulbs at no cost to residents. Higher watt and 3-way light bulbs are available for purchase by residents at low cost in the resident shop at KaH. Many residents are uncertain about the nature of the bulbs in their desk lights and floor lamps. The LED light bulb initiative sends a resident team knowledgeable about light bulbs to visit resident homes on request. Their role is to encourage replacement of energy-wasting incandescent light bulbs with LED light bulbs and to determine if additional 60 watt bulbs should be requested from the Facilities Department.

Arthur Holcombe helps resident Larry Daloz understand the importance of LED light bulbs.

The results to date have been impressive. As of mid May, a total of 528 60-watt LED light bulbs have been provided to 95 resident apartments. It is estimated that on an annualized basis the 528 bulbs will save Kendal about $5,610 in electricity expenses. The Facilities Department recently determined that a total of 140 apartments had not approached it for replacement LED light bulbs. In the months ahead the LED light bulb initiative will approach residents in these apartments to help determine whether they might benefit from a reassessment of their light bulb situation, and whether a switch to additional LED light bulbs might be advantageous in further reducing the carbon emissions footprint and electricity expenses at KaH.

Puzzle for the Planet

Word Jumble: Can you unscramble the letters to form a climate-related word from the Word Bank below?

1. NBACRO TOFOITNRP _____
2. ELD ULBB _____
3. ESUNREGEHO SASEG _____
4. RSEFTO GHIBNAT _____
5. DISPSEITCE _____
6. LNOISPLTARO _____
7. VIBDOIYSTERI _____
8. ONCVEAONSRTI _____
9. HTNMEEA _____
10. NESATEME _____
11. SBIECHRDEI _____
12. IGROCAN _____
13. DNAL RETSAWD _____
14. TAVEIN SLNPTA _____
15. NEYREG _____

Word Bank:

biodiversity	carbon footprint	conservation	easement
forest bathing	greenhouse gases	herbicides	land steward
LED bulbs	methane	native plants	organic
pesticides	pollinators	energy	

Answers: 1. Carbon footprint. 2. LED bulb. 3. Greenhouse gases. 4. Forest bathing. 5.Pesticides. 6. Pollinators. 7. Biodiversity. 8. Conservation. 9. Methane. 10. Easement. 11. Herbicides. 12. Organic. 13. Land steward. 14. Native plants. 15. Energy.

Wrapping Up

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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.

Is your Kendal Calculating its Carbon Footprint?

SSAFE has met a milestone on the path to net zero! The SSAFE Carbon Footprint Work Group recommends the following process to calculate your campus carbon footprint:

Step 1: Calculate building energy use and its associated carbon footprint using EPA's Portfolio Manager program.

Step 2: Calculate additional Scope 1, Scope 2, and Scope 3 emissions using a program to be determined (such as SIMAP or other suitable program).

Watch for more details in the next newsletter.

SSAFE Newsletter

This newsletter is a publication of SSAFE, a non-profit organization comprised of 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!

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