

Living Green Quarterly

September 2023



Sentinel believes that sustainability – or living “green” – is at the heart of protecting our future. Working together we can find the fun in being Green.

Green VS. Green

Which fun fact will you show off at the next dinner party?

When bodies of water look especially green, it means there are a lot of microscopic algae, called phytoplankton, growing near the surface. As waters warm, the greens will intensify.

SOURCE:
National Geographic

Mycoremediation is a method that utilizes a root-like structure in mushrooms to break down a wide array of pollutants in damaged or polluted environments.

SOURCE:
University of San Francisco

C'mon, Baby, Don't Light My Fire

By Heidi Adams



For as far back as we know, fires have been vital for some wildlife habitats. The diversity of plants and animals on so many public lands have developed a symbiotic relationship, learning to depend on fire. However, these have normally been periodic, low-intensity fires that help to restore the ecosystem by killing insects and diseases that damage forests, promote new growth, clear old vegetation and leave behind space and important nutrients for new plants to feed on and grow. These flames would routinely burn at a low temperature, meaning they are hot enough to burn small, dry and low-lying vegetation, but not everything.

Unfortunately, since the beginning of the industrial era in the 1760s, the Earth's temperature has increased faster than has ever naturally occurred and it is impacting nature in progressively drastic measures. This includes an increase in extreme weather, such as some areas experiencing an increase in severe flooding, while other areas are dehydrated with drought. These droughts mean that previously lush landscapes are drying out, which increases the amount of “fuel” for the fires to burn, promoting full-fledged mega wildfires that are more destructive, overwhelming and frequent.

With wildfires, there is an immediate threat to our lives, homes and businesses, as seen most recently in the devastating fires in Lahaina, Maui. Additionally, as seen with the recent Canadian fires, there is a lingering impact from the air pollution that can affect peo-

ple thousands of miles away. The inferno from Quebec wafted to the East Coast and blew as far west as Minnesota. The smoke from these wildfires put 70 million US residents under air quality alerts, as the smoke is filled with greenhouse gases (mostly carbon monoxide with methane and nitrous oxide).

Forests store substantial amounts of carbon naturally but have become carbon sinks that offset human-caused emissions, meaning forests have worked hard to absorb more carbon and carbon dioxide than is necessary for them to survive. Wildfires then release carbon monoxide, and other greenhouse gases, back into the air. The amount of gas released increases with fire severity, creating a build-up of gas and heat in the atmosphere, intensifying the greenhouse effect and causing more extreme weather patterns and stronger wildfires.

The only way to break this vicious circle of climate change and wildfires is to start eliminating, or at least dramatically lowering, our collective footprint. Some ways to reduce our individual carbon footprint is to make conscious and intentional choices. It can be choosing to take public transportation or biking instead of driving, eating locally from green markets instead of buying food from stores where food is transported from afar, choosing to travel on vacation by train instead of airplanes or cruise ships, or simply choosing energy efficient appliances at home. There are many choices in every facet of life that could lessen your personal carbon footprint. We challenge you to find the small or large green choices that you can incorporate in your life.

Sustainability Spotlight

By Karen O'Brien



Lou Mitchell

Vice President - Yardi Systems Group

What does sustainability mean to you?

Sustainability means caring for the future of the planet and doing our individual best to leave a healthy world to future generations.

How have you adapted a more sustainable lifestyle?

We've adopted a no-paper rule at home, moving all of our bills to an electronic format. We've increased our alternative protein consumption, introducing more bean-based meals. Our apartment complex has installed solar panels on all rooftops, which has drastically reduced our electric needs.

In your opinion, what is the most pressing environmental issue currently?

The quickly approaching "climatic tipping point" 2.7 F degrees above pre-industrial temperature mark. Changes to weather patterns may cause food shortages and extreme weather events that result in catastrophic loss of life. Rising sea levels will reduce usable land along coasts across the planet.

What made you decide to become a more environmentally conscious individual?

I want to leave a viable world to my children. One where the air is clean, food is plentiful, and extreme climate-related disasters are minimal.

How are you engaging your staff in your sustainability efforts?

We strongly resist the use of paper, especially to print reports that are just as easily viewed on-screen. We've implemented the rollout of electronic devices for site staff to reduce paper use beyond the home office as well.

Where There's a Will, There's a Way

By Skye Randazzo



The ocean,

covering 70% of the planet, is a fundamental part of earth's climate system and absorbs more than 90% of the heat from human-caused global warming, about one-third of the earth's carbon emissions. Most of the absorbed heat rests in the top 700 meters of the water, impacting most of the marine life and habitats, including sea plants, animals, coral reef and fish migration patterns in search for cooler waters. Additionally, it causes a decline of essential sea ice of the Arctic ecosystem and the animals who inhabit it. Though marine life is taking the brunt of ocean warming effects, warmer ocean temperatures are also connected to ocean acidification and some weather extremes that lead to increasingly severe hurricanes, heavier rainfalls and snowstorms.

Hurricanes: Hurricanes begin with a small atmospheric disturbance that turns into a tropical depression. Warm water temperatures (usually above 80° F), enough moisture in the atmosphere and uniform winds can become a hurricane. Since water surface temperatures are rising and there is an increase of water vapor in the atmosphere, it was once predicted we would see an increase in hurricanes. Luckily, this has not been the case; there have been an average of 80 tropical cyclones per year since 1985. Unfortunately, the strength and moisture in hurricanes have increased, allowing for more rainfall. In fact, since 1975 there has been a global increase in Category 4 and 5 hurricanes by 25%-30% per year, with a decrease in Category 1 and 2 storms at approximately the same rate. In summary, warm surface waters provide energy for hurricanes, allowing the cyclones to be progressively damaging once on land.

Heavier Rain/Snowfall: Our oceans' precipitation cycles are vital to the movement of clean water around the earth, however, higher temperatures in the sea's surface means higher rates of evaporation into the atmosphere. Following its natural cycle, these water vapors then condense to form rainclouds that release greater amounts of water, causing more rain-generated floods. The same cycle can be applied to the possibility of heavier snowstorms during the colder seasons. Additionally, the warming of the planet influences the amount and allocation of precipitation, which means changes in ocean temperatures causes the distribution of rain to fall predominantly on already wet areas, while dry regions of the world become drier.

Ocean Acidification: Nearly one-third of human-caused carbon dioxide is absorbed by the ocean waters, forming carbonic acid and decreasing the pH of the water. This change in ocean chemistry makes it harder for calcifying organisms like coral reef, shellfish and some plankton to grow, reproduce or create their protective shells and exoskeletons. Losing these to the disruption of what was a stable environment for tens of millions of years would cause devastation in the marine ecosystems and could wreak havoc to people as well. Plankton and shellfish are the base of the marine food web and if eliminated would deplete the supermarket seafood supply and whatever available would be diminished of nutrition and quality. Additionally, the loss of coral reef structures would essentially remove the buffers for shorelines against waves, storms and floods, which would tremendously impact homes and businesses on the coastlines. Coral reef also supports local economies by sustaining fisheries and supporting tourism for many places around the world.

Fundamentally, it would be in our best interest to ensure a healthy and thriving marine ecosystem. We can help slow ocean warming and acidification by making changes in how we live and reducing carbon emissions; shop sustainably, refuse any single-use plastic or paper products, use less items that will leave microplastics in our waterways and use reef friendly sunscreen when enjoying a day at the beach. With the right knowledge and a joint effort, we are all capable of making our planet a better place for tomorrow.



Enclave at Cherry Creek Apartments

Community Garden

By Mike Leigh, General Manager



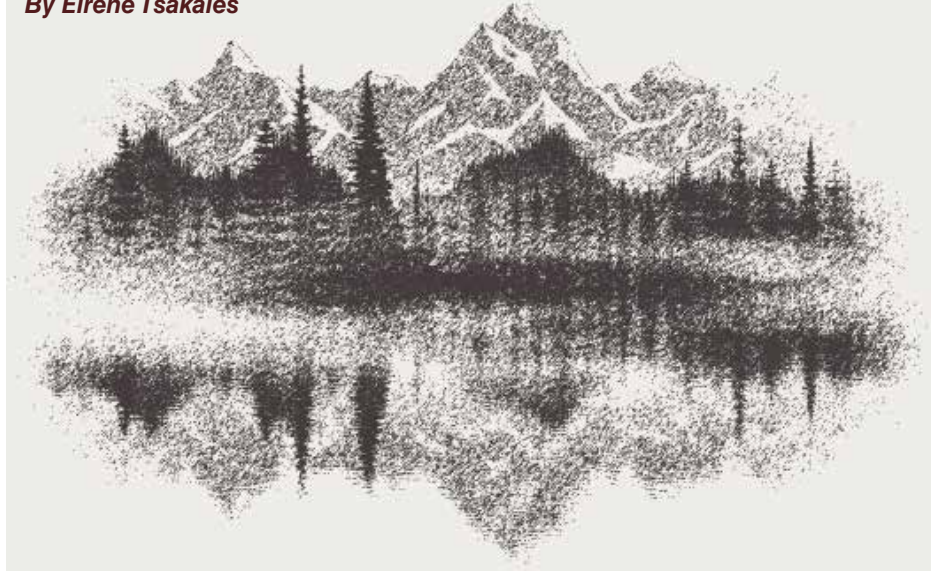
Sentinel's Enclave at Cherry Creek, located in Parker, Colorado, has a beautiful community garden. Usually during the first week of June residents begin planting various foods, flowers and herbs in their designated plot, such as corn, green beans, peas, sunflowers, cabbage, spices, peppers, tomatoes and cucumbers, just to name a few. Residents are responsible for maintaining their own designated plot.



Don't Let Climate Change Get Lost In Siberia

*Why we should never say Let it Go,
to Thawing Permafrost*

By Eirene Tsakales



Siberia is a vast region that encompasses a diverse range of ecosystems, including the tundra, the grasslands, mountain ranges, many large rivers and lakes, a wide range of wetlands and the boreal forest – the largest land biome in the world, covering much of Siberia; Lake Baikal alone holds 20% of the world's unfrozen freshwater and Siberia is home to the world's oldest permafrost, some of which has been frozen for over 650,000 years.

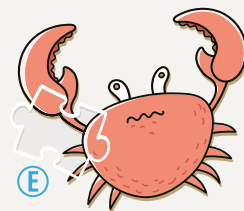
Unfortunately, Siberia is warming up faster than any other region on the planet, causing the permafrost to melt drastically; this is reshaping the landscape as lakes are forming and hillsides are collapsing. Scientists have been warning against letting the global average temperature rise by 2°C, yet Yakutia, an enormous wedge of eastern Siberia, has warmed 2° to 3°C in recent years.

Melting Siberian permafrost is turning parts of the tundra into muddy landscapes, or wetlands, causing the local flora to disappear and the wildlife that feeds on it to starve. Couple this with the 5.4 million people who live in Russia's permafrost zone, the changing climate has disrupted their homes and livelihoods. For example, rivers are rising and moving quicker, causing entire neighborhoods to collapse. This land had previously been sustained for generations by the permafrost; now that it has thawed, it has become useless to the native people who only understood how to produce essential foods and crops in a permafrost environment. The sudden change from permafrost to swampland leaves local Siberians with little choice but to migrate.

On a global level, the problem is that permafrost contains twice as much carbon than is already in the atmosphere. When thawed and released, this can rapidly speed up climate change. Additionally, scientists are trying to identify viruses and other hazards caused by these melted layers. This includes radioactive nuclear waste, which has been dumped in Siberia since the beginning of nuclear testing in the 1950s, and dormant microorganisms from extinct ecosystems, with no known understanding of how they would interact with the modern environment. In any of these cases, it is agreed that the best strategy is to stop the progression of the thawing.

However, the only way to prevent further thawing is to lessen our carbon footprint by actively learning and applying ways to rein in our power usage. Along with dressing "climate" smart, try avoiding fast fashion, planning meals ahead and purchasing only what you need. This could make a world of difference when discussing the future of climate change.

THE ANSWER IS...



Custard Filled Pumpkin

Ingredients

- 1 small kabocha or sugar pumpkin (anything too big will take too long to cook)
- 4 eggs
- ½ tsp of salt
- ½ cup of sugar
- 1 tsp of vanilla extract
- 1 cup of coconut cream
- ½ cup of maple syrup



Food and Toy Drive



As the holidays approach each community will be participating in local food and toy drive collections. Donations will be collected at our clubhouses to make drop-offs easy for our residents.



Please watch for donation boxes in your management office starting in October. Details on how to participate will be emailed to you soon. We look forward to working together to help those in need in our communities this holiday season.

Directions

- 1) Wash the pumpkin thoroughly..
- 2) Preheat the oven to 300° F and pull out a baking dish large enough to hold a small pumpkin.
- 3) Fill a small pot or saucepan with water and bring to a low simmer.
- 4) Keeping in mind the pumpkin will contain liquid, cut an opening at the top of the pumpkin that is just big enough to scoop the seeds out. Remove seeds. Pro tip: use an electric mixer with one whisk connected to help remove the seeds from the pumpkin.
- 5) In a mixing bowl, bring together the eggs, sugar, vanilla extract and salt. Whisk thoroughly, then pour in the coconut cream and mix well.
- 6) Place the pumpkin into the baking dish and pour the custard mix into it. Put the previously cut pumpkin cover back on top of the pumpkin.
- 7) Add about an inch of hot water into baking dish around the pumpkin.
- 8) Place the baking dish into the oven and bake for about an hour and a half. Test to see if the custard is set by piercing a knife through the pumpkin and into the custard. If the knife goes through the pumpkin easily and comes out clean, it is finished.
- 9) Remove the pumpkin from the cooking dish and allow it to cool down completely to room temperature. This will allow the custard to set.
- 10) When plating, slice wedges to desired size, and add a touch of maple syrup to each slice before serving and eating.

Source: Skye Randazzo's recipes