

# Conservation & Conversations

Global Climate Change

12:30 - 1:30 p.m.



theZOO  
LOUISVILLE

# GLOBAL CLIMATE CHANGE

Global Climate Change (known in the past as Global Warming) is a broad topic that takes years of study to fully understand. What this guide offers are basic explanations of climate change and related concepts along with resources for further learning. We hope this information aids your understanding of our changing planet.



## What Does Climate Change Mean?

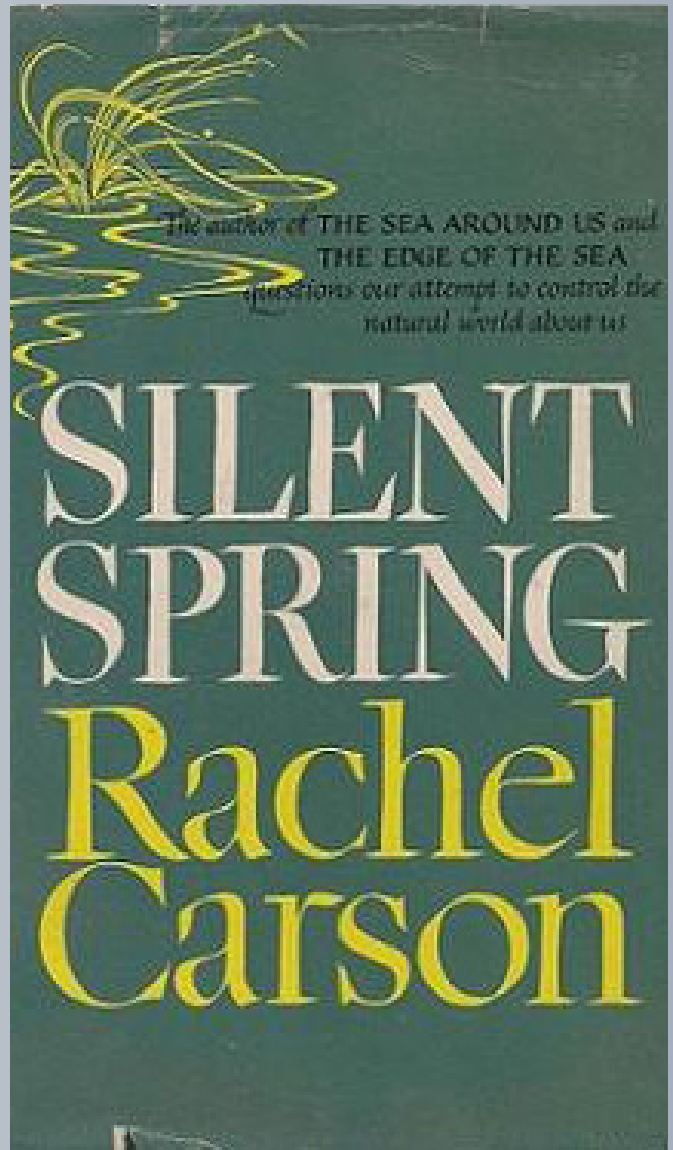
[Climate](#) is the long term (30 years or more) pattern of an area's temperatures, precipitation and other weather events. Changes in climate happen gradually overtime and can cause severe weather to occur, much like the tornadoes, tropical storms and unseasonable temperatures many areas have experienced in the last decade. Since the increase in greenhouse gas emissions that began with the Industrial Revolution, the pace of [climate change](#) has accelerated on our planet. The global climate is getting warmer, a phenomenon sometimes called [global warming](#); the last five years have seen some of the hottest recorded temperatures. This warming has consequences for humans and animals: rising sea levels; shrinking glaciers and ice / snowpack at the poles and on mountain peaks; changes to growing seasons and migration patterns; and increases in the frequency and severity of weather events.

## Earth Month: A Brief History

As a part of the wave of climate activism and awareness that sparked in the mid-20th century, [Earth Month](#) (starting in April of 1970) and [Earth Day](#) (first officially celebrated on April 22, 1970) were created to give the movement one voice. The [concept was originally championed by Senator Gaylord Nelson](#) as a teach-in on college campuses and way to coalesce several disparate groups advocating for similar changes into one unified voice. Now Earth Day is the face of a global movement to push for environmental change and is celebrated in more than 190 countries. Across the globe, activists, scientists, government officials and many others celebrate the Earth in April and highlight how we can continue to do better by our planet. Here at the Louisville Zoo, we celebrate all month long with our annual [Party for the Planet](#).

## The Impact of Rachel Carson

Rachel Carson and her book *Silent Spring* are often considered the beginning of the modern environmental movement. Born in Pennsylvania in 1907 and trained as a marine biologist, Rachel Carson spent her life educating others on ecology and conservation. Carson left a 15-year career with the [U.S. Fish and Wildlife Service](#) after the commercial success of her second book "[The Sea Around Us](#)," (published in 1951) to pursue writing full time. Carson died in 1964, just two years after publishing "[Silent Spring](#)," her book that [sparked the modern environmental movement](#) and was one of the first to push humanity to think about our impact on the natural world. Shortly before her death, Carson testified in front of Congress and defended her environmental claims to the public and in the press while under attacks from chemical companies. Her work and her steadfast defense of her findings led to a ban on DDT, a highly toxic insecticide that was linked to an increased risk of health conditions in people and animals. Much of the information Carson used in "*Silent Spring*" was available to the public, but she was the first to arrange it in one place and in a way that the public could both understand and would read. Her life and work were honored by the U.S. Fish and Wildlife service in 1969 with the naming of the [Rachel Carson National Wildlife Refuge](#) in Maine.



# Climate Change and Climate Justice

The science behind global climate change gets clearer every day — and the drive from the public is intensifying for governments and corporations to enact change and reduce humanity’s global carbon footprint. Here in [Louisville](#), activists are putting pressure on the city and local companies to put the health of our climate ahead of the bottom line. Public pressure led to the creation of [city](#), state, and federal regulations to support sustainability as well as promote existing environmentally friendly practices. The [Green New Deal](#) as proposed in 2018 and 2019 was a comprehensive but non-binding resolution and is not moving forward as a single piece of legislation or policy. Instead, multiple pieces of legislation like President Biden’s [Build Back Better Plan](#), the [Inflation](#)

[Reduction Act of 2022](#), and the [Recovering America’s Wildlife Act](#) will work together to create new “green” jobs, preserve plant and animal habitat, and reduce harmful emissions.

As we learn more about the consequences of climate change, it’s clear that climate issues are civil rights issues, with low-income populations and populations of color here in the United States and around the world facing the worst issues. Environmental or [climate justice](#) is a term gaining mainstream popularity and shows the connections between social justice issues and climate issues. It takes low-income communities of color longer to recover after severe weather events and other climate-related disasters because of the systemic social justice issues our society experiences.

Legislation and activism like school-strikes (a tactic popularized by [Greta Thunberg](#)) are some of the efforts being made globally to convince the world to acknowledge that our climate is in crisis. Tools like the [Climate Resistance Handbook](#) and organizations like [Climate Justice Now](#) are just two more ways the climate movement is mobilizing. The climate crisis has dire implications for the health and safety of future generations on our planet, and young activists are working [to be heard and supported](#) by those currently in power.



# What is Sustainability?

Sustainability is a broad concept that is most often defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” This definition comes from the 1987 [United Nations Brundtland Commission](#), which is the global record of our sustainability aspirations and agenda, as that body tries to reduce poverty and inequity around the world. The UN’s [sustainable development goals](#) are 17 items that every developed nation can work to improve to increase global equity and sustainability.

In the U.S., the EPA bases [sustainability](#) on the principle that “Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations.” This is like the UN’s definition but the EPA principle, fittingly, places emphasis on the environmental aspects of how humans interact with our planet.



## Sustainability at the Louisville Zoo

- **Water and Hydration!** The Zoo works to conserve water and energy usage in our exhibits by having building in water reclamation and natural convection cooling built in (even in our Splash Park!). You can read about our other measures on our [website](#). For guests, there are water fountains and bottle refill stations provided by The [Louisville Water Company](#). We encourage you to bring a reusable water bottle and take advantage of these water sources.
- **Compost and Recycling!** The Louisville Zoo works with [Westrock Recycling Solutions](#) and Metro Public Works to manage all solid waste at our facility. As you walk through the Zoo, you’ll see signage explaining our recycling policy and our color-coded trash cans! We work to make sure as much as possible is kept from the landfill by sending all our clear bagged garbage to a West Rock facility and by donating usable items to organizations that can reuse them or provide specialized recycling like [Eco-Cell](#) and [WaterStep](#). Food waste (including from our animals!) gets sent to be composted and we even mix in some herbivore dung for extra nutrients! We use the compost on Zoo grounds and sell it as [ZooPoopyDoo](#) during our [Party for the Planet](#) in April.
- **Green Roofs and Solar Panels!** Our [HerpAquarium](#) building features a [green roof](#) and exhibits grouped by climate to increase the energy efficiency of the space. Outside the HerpAquarium, the zoo continues to add solar panels, we now have 30 solar panels on the administration building and more powering the carousel. We are planning to continue adding panels to reduce the Zoo’s carbon footprint. If you’re interested in getting solar panels for your home the city of Louisville has a program that can help! [Solar Over Louisville](#) will help you learn about our city’s renewable energy goals and the benefits to going solar. The program can even help you get discounts on the panels for your home!



## Compost, Reduce, Reuse, Recycle

- **Composting is an important step individuals and businesses can take to reduce their food waste** and help lower the number of harmful emissions produced by landfills. Not everyone has space for [home composting](#), but our city's Department of Public Works has [solid waste management](#) policies in place to help you with composting, recycling, and even yard waste removal! If you don't feel up to maintaining your own compost, there are still options like [Louisville Compost Co-op](#) that will get someone else to do all the hard work of turning food scraps into topsoil for you.
- **One of the biggest ways that individuals can get more sustainable is to reduce their resource consumption.** This can be any number of small changes, using reusable containers instead of disposable ones for our food and beverages, turning off your vehicle if you will be idling for longer than 10 seconds, even simply donating belongings that are no longer useful to you instead of putting them into the garbage can have an effect.
- **Another component of reducing your consumption is to reuse items.** This can be as simple as using a reusable water bottle or bringing reusable utensils to work so you do not need to employ single-use items at lunch. Reusing can also save you money in the short and long-term. Passing down clothing, furniture, home renovation materials and other household items you no longer use by donating them to organizations like Goodwill or [The Habitat Restore](#) helps to keep useful items in circulation and preventing the resource consumption of manufacturing. Even getting your media (books, movies, music, etc.) from sources like the [library](#) or local used bookstores like [The Rosewater](#) here in Louisville.
- **Recycling is another thing we can make a part of our daily life** – whether it is household [recycling](#) through our city's public works department or more specialized recycling of minerals and precious metals. Much of the technology we use every day, like our smartphones and laptop computers, use small amounts of rare minerals and precious metals like gold in their manufacture. Companies like [Eco-Cell](#) (founded here in Louisville in 2003!) collect those items and send them off to be resold or processed for usable parts. Keeping these items and their component parts in circulation helps to protect the gorillas and the people who live near them from the harmful environmental and social consequences of mining.



# GreenWashing and Other Factors in Eco-Consumerism

Sustainable practices are more important to consumers than ever. This has unfortunately led some corporations to practice greenwashing. [Greenwashing](#) is when a company spends more money on the appearance of environmentally sustainable business practices than on minimizing their environmental impact. These greenwashing practices can be small in impact like hotels asking you to hang your towels to reuse them during your stay; this saves the hotel money but also decreases water usage and chemical waste from laundry soaps. They can also be bigger in impact like the Volkswagen [diesel emissions scandal](#) in 2015 and anywhere in between. One of the most common forms of

greenwashing is labeling a product recyclable or biodegradable when in reality it takes either more resources to recycle than to make a new one, recycling the product will produce harmful emissions, or it requires a special facility or machine to fully breakdown in the environment. In addition to the intentional profit motivated greenwashing, there is the unintentional greenwashing that occurs when consumers and industries just do not have enough information on a topic. One good example of this is the effects of [chemical sunscreens](#) on marine life (especially [coral reefs](#)). We are still learning about the effects of chemicals in [sunscreens and other skincare products](#) on reefs,

and on humans. There are several brands on the market currently labeling their product as reef-safe and even more pressure to switch to a mineral sunscreen as that product is considered natural and safer for the environment. The truth is we just do not know the exact effects of reef-safe or even mineral based products on the reefs and on ourselves and you should do your own research and for some products consult your doctor before making any changes to your purchasing habits.



## Live Virtual Conversations on Field Science

### **Earth Month and the Climate Justice Movement Wednesday, April 26, 12:30 - 1:30 p.m.**

Join our conversation this month as we explore the history of Earth Month and get an overview of the current environmental movement. As we learn more about our planet, we are learning more about how we can protect and preserve our planet and how we can protect each other as our planet changes.

<https://meet.google.com/rko-jxqq-xjf>  
(US) +1 216-839-9441 PIN: 985 460 561

### **Biodiversity Wednesday, August 23, 12:30 - 1:30 p.m.**

Join the conversation to learn how biodiversity can protect our ecosystems in the face of global climate change. Biodiversity is a term that references all the different types of organisms found on our planet — whether they are in a specific country or ecosystem, everything from microbes to megafauna and the flora that go with them. As we face increasing changes, maintaining biodiversity and even genetic diversity within a species is increasingly important to the health of our planet.

<https://meet.google.com/fon-xfwt-akk>  
(US) +1 405-352-8206 PIN: 151 633 720

### **Green Burial Wednesday, Oct. 25, 12:30 - 1:30 p.m.**

Join the conversation and learn about the green burial movement with us! Decomposition is an important part of the life cycle of our planet. Human decomposition plays a role just like the decomposition of any other animal or plant — but it is often stopped by the way humans choose to bury our dead. Our conservation conversation this month will focus on green burial and the way our funeral traditions have changed over time to bring us closer to or further away from nature.

<https://meet.google.com/pgq-bvvp-vhi>  
(US) +1 262-922-8841 PIN: 733 723 166





# TO LEARN MORE:

## In Print

- [The Treeline by Ben Rawlence](#)
- [The Waste-Free World by Ron Gonen](#)
- [What Can I Do? by Jane Fonda](#)
- [Spring After Spring by Stephanie Roth Sisson](#)
- [The Story of Climate Change written by Catherine Barr and Steve Williams and illustrated by Amy Husband and Mike Love](#)

## On Video

- [A Polar Bear's Migration Turns to Chaos | Nuisance Bear | The New Yorker Documentary](#)
- [Greenland's Polar Bear Patrol | ARTE.tv Documentary \(narrated in German with English Subtitles\)](#)
- [Have We Made ANY Progress on Climate Change? Here's the Data, You Decide - PBS Terra](#)
- [What People Get Wrong About Climate Change - Vox](#)
- [Before the Flood \(2016\)](#)
- [Eating Our Way to Extinction \(2021\)](#)
- [A Life on Our Planet \(2020\)](#)

## Online

- [NASA Uses 30-Year Satellite Record to Track and Project Rising Seas](#)
- [WHAT REMAINS OF THE U.S. GREEN NEW DEAL?](#)
- [Climate and Energy Legislation](#)
- [The New York Times Climate Hub](#)
- [One Health](#)
- [UN Sustainable Development Goals](#)
- [Honor the Earth](#)
- [Louisville Climate Action Network](#)
- [Louisville Grows](#)
- [Trees Louisville](#)

