
AIR POLLUTION

Air pollution kills an estimated seven million people worldwide every year (World Health Organization). Increased mortality from stroke, heart disease, chronic obstructive pulmonary disease, lung cancers and acute respiratory infections are a result of air pollution.



Air pollution is caused by solid and liquid particles and certain gases that are suspended in the air. These particles and gases can come from car and truck exhaust, factories, dust, pollen, mold spores, volcanoes and wild fires. **In 2020, the EPA reported that about 68 million tons of air pollution were emitted into the atmosphere in the US**, contributing to the “formation of ozone and particles, deposition of acids, and visibility impairment.” Legislation such as the Clean Air Act in the US can help reduce air pollution by establishing national air quality standards and regulations on hazardous air pollutants.

IN SUMMARY

Everything we need to survive depends either directly or indirectly on our natural environment. *Environmental stewardship, conservation, and sustainable practices* are more important than ever as the global population approaches 8 billion people. Simple ways we can help to make a difference include lifestyle changes to reduce, recycle and reuse, plant more trees, shop and buy local, grow your own food, and composting. We can make a difference, one person, one household, one yard at a time.

“What you do makes a difference and you have to decide what kind of difference you want to make.”

Jane Goodall

HOW TO BECOME A MASTER GARDENER?

Complete a 12-15 week training course in core subjects taught by the Horticulture extension agent and other University of Kentucky specialists. In return for the training you must complete 40 hours of volunteer time within one year of course completion. After the initial training, volunteers are required to contribute 20 volunteer hour and 10 continuous education credits per year.



PENNYROYAL MASTER GARDENER ASSOCIATION

University of Kentucky Cooperative Extension

Serving Hopkins, Webster, and Muhlenberg counties.

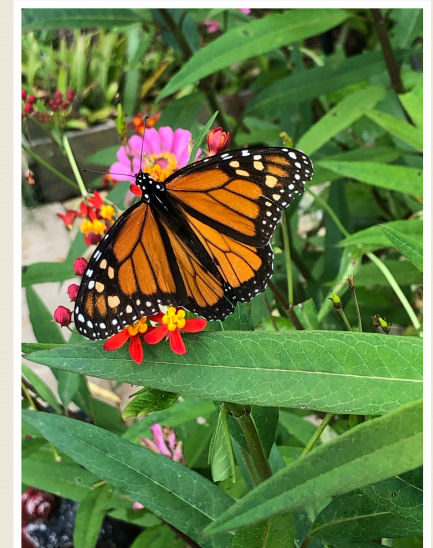
75 Cornwall Drive, Madisonville, KY 42431

270.821.3650



ENVIRONMENTAL CONCERNS

HOW CAN WE MAKE A DIFFERENCE?



The Pennyroyal Master Gardener Association is committed to public outreach and education about gardens and landscaping. This also means caring about the environment and everything affecting it. This brochure provides some practical, yet simple solutions to five environmental concerns.

WASTE MANAGEMENT

Some of the most obvious effects of improper waste management include soil, air, and water contamination producing harmful effects to human, animal, and marine life.

Per the EPA, Americans produce about 292.4 million tons of municipal solid waste (MSW) annually. This equates to approximately 1,800 pounds per person per year on average; and only about 34% is recycled. Once MSW is buried in the landfills, we may not see it, but it's there and creating dangerous environmental issues for longer than most of us realize. For example, a plastic bag can take up to 1,000 years to decompose, and plastic bottles 70-450 years. **One million years for glass bottles!**

What can we do? Here are a few ways to get started:

—**Recycle.** Begin recycling plastic, paper, and cardboard. Check with your local agency about what is acceptable and how to do it.

—**Reduce.** Buy and use less plastic. Choose refillable water bottles and reusable shopping bags. Avoid single use products.

—**Reuse.** Create a composting site in your yard for leaves, grass, sticks, and appropriate food scraps. Compost produces excellent organic matter for gardening.



HABITAT LOSS/LAND USE



Habitat Loss and **Land Use** are closely related and interconnected. In simple terms, **Habitat Loss** is defined as “losing your home.” The cause of habitat destruction can be either man-made or natural in origin. Examples of man-made causes of habitat loss and land use include land development, construction, deforestation, agriculture, fire and other natural disasters.

Land Use is the function of land - what it is used for. In urban areas (towns and cities) land use could be housing or industry. In rural areas (countryside) land use can include forestry and farming. Land is not a renewable resource—we cannot create more.

“The world’s forests, swamps, plains, lakes, and other habitats continue to disappear as they are harvested for human consumption and cleared to make way for agriculture, housing, roads, pipelines and the other hallmarks of industrial development.” (WWF). Because **everything connects**, the preservation of **biodiversity** is impacted. The health and balance of the natural world’s ecosystems is necessary to sustain humanity.

Habitat destruction is the primary cause of extinction worldwide. Since the dawn of the Industrial Age in the 1800s, here are some staggering statistics: 40% of the world’s plant species are currently at risk of extinction, nearly 600 plant species have been lost from the wild in the last 250 years. over 40% of amphibian species, 33% of reef-forming corals and marine mammals—you get the picture.

Where there is a will, there is a way. There is always hope! Consider adding native trees, shrubs, and perennial flowers to your landscaping plans. This small beginning can provide food for insects, birds, pollinators, as well as promote biodiversity and healthier local ecosystems. If you need help getting started, reach out to the Pennyroyal Master Gardener Association for resources, educational materials, and planting ideas. *We would love to help you get started!*

WATER POLLUTION



“Thousands have lived without love, but not one without water.”
W.H. Auden

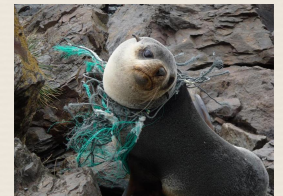
Water is life. It covers 71% of the Earth’s surface and is home to over 2 million species of animals and plants. Water pollution is one of the most severe environmental issues. Contaminated water kills more people every year than war and violence combined (UNDESA).

The most common types of water pollution are agricultural, sewage and wastewater, oil pollution, and industrial toxic waste. Fertilizers, herbicides, and pesticides used in industrial agriculture are responsible for many of the dangerous chemicals ending up in our drinking water.

The use of household chemicals, lawn fertilizers, pesticides, herbicides, and toxic waste chemicals result in run-off into the storm water system that ultimately feeds into our drinking water sources. **As consumers, we can be the solution by reducing the use of, or replacing with safer alternatives!**

OCEANS

Plastics are non-biodegradable and plastic pollution is a widespread problem affecting the marine environment. It threatens ocean health, the health of marine species, food safety and quality, human health, coastal tourism, and contributes to climate change.



- Over **300 million tons of plastic** are produced every year and is used in almost any manufactured object.
- At least **14 million tons of plastic end up in the ocean** every year, making up 80% of all marine debris.
- Marine species ingest or are entangled in plastic debris causing death or serious injury.
- About half of the world’s seabirds have eaten plastic, and experts have found residue in their stomachs.