When many people hear the word water they think of the luscious green fields of corn, a cool dip in the pool, a nice refreshing drink of water after a long day of work, or maybe even the chemical compound H2O. However, when I think of all these things I also think of the dangers that come with water pollution and water waste, and how every aspect of our day to day lives will be drastically changed if water quality continues to go down hill. Everything from the smallest single cell organisms to the largest mammals, a blade of grass in your front yard to the most fruitful Oregon Maple. There are many ways we can all help to put an end to this global catastrophe. This is why we; Kentuckians, Americans, people all across the globe, people of all ages and backgrounds, need to change our ways and take a stand for water conservation.

The first thing you need to know is what an ecosystem is and how they function. An ecosystem is a unit of all living things, from the microscopic organisms which are organisms you can't see with the naked eye, to the largest component such as a blue whale, all working in unison. Every component has an effect! Examples of these ecosystems include forests, jungles, lakes, rivers/streams, the deep oceans, and even the desert. Every organism in the ecosystem needs nitrogen, carbon, oxygen and water. These natural elements are reused or recycled. Water has its own cycle of reuse and recycling called the Hydrological cycle, or what we all know was the water cycle. It all starts off with transpiration, the release of water vapor through photosynthesis in the plants, and evaporation of water in lakes, ponds, and all bodies of water. The water then condenses into the clouds and precipitates out of the clouds in the form of what we all know as... rain, snow, and sleet.

One way urban communities can help prevent water contamination is planting trees and starting urban forests; which is the growth of trees in all cities and towns. These trees are a key component of stopping stormwater runoff. The runoff contains pollutants from industrial areas, vehicle bi-products, and other sources. The pollutants in the water can degrade surrounding bodies of water and are also toxic to fish, wildlife, and humans. The trees create a process called interception. Interception is the capturing of rainwater through trees, and gradually dispersing it into surrounding bodies of water, this slows the release of pollutants into water, acting as a filtration system. This rain water will then be released through evaporation or transpiration. In the urban areas when the water reaches the soil, tree roots filter the water and absorb nutrients and pollutants while letting the water be absorbed into the soil. The tree canopy can lower the temperature of the water, which will reduce the amount of water that runs off. Some beneficial side effects of planting urban trees are natural beauty, less noise pollution, creates habitats for wildlife, and produces clean fresh air.

A very simple household way to conserve water is reducing the amount of water you and your family use. Reducing your water aids in reviving aquifers. An aquifer is an underground body of water, often reached with a water well. You can use energy efficient appliances, and low flow sprinklers with a timer. Using these two methods will even reduce your water bill and negative lawn runoff.

An extremely simple way of individuals, like yourselves, pitching in is being cautious of all biodegradable waste thrown into nature and to stop littering. Litter and harmful waste will eventually make its way into a watershed which can have detrimental effects. A watershed is a piece of land where all water there will eventually arrive at one common stream or body of water. Being that everyone lives in a watershed means that everyone is affected. The water flow in a
watershed is a continuous flow of events and if you litter the pollutants will be picked up sooner or later and could make its way to the common body of water.

One way that weaves into the previous solution is reusing, recycling, and rebuying. Instead of using plastics, which are one of the most common forms of littering and can strangle animals, use reusable bags and containers, and water bottles that are refillable. Did you know that it takes 10 to 20 years for a plastic bag to decompose and 450 years for a plastic water bottle! Recycling is another amazing method if you are unable to use reusable products, this process reuses plastic, paper, cardboard, glass, and metals like aluminum and steel. All recycled products come together to make recycled materials that you can buy, keeping these harmful objects out of water and habitats. You can even start your own simple compost bin. A compost bin is a mixture of all your leftovers, unwanted food, and dead plant material that is used as a rich fertilizer for plants. You can start a garden with this that will also help water quality!

Farmers are the oldest conservationists and the best. They spend their life and time making conscious decisions that affect the world around them and have the hefty responsibility of changing their operations for the prosperity of humanity. Their actions keep all humans, animals, plants, and the entire globe sustained. But we can’t only depend on farmers to solve the biggest problem humans face, I, you, Kentuckians, we... we have to persist, we have to take charge and conserve our valuable resources. Less than 4% of the world’s water is drinkable, so this universal quandary is more detrimental than ever, but with ever changing science and more and more ways everyone from everywhere and of all backgrounds can help, the solutions are easier than ever. If we don’t, this life threatening challenge will have even more irreversible effects that can and will change our day to day life.

1. https://www.epa.gov/recycle/recycling-basics
%20many%20birds%20and%20mammals.
   -Benefits%20of%20Composting%20a%20rich%20nutrient%20filled%20material.