The first image shows various pieces of garbage along the edge of a body of water. Similar situations exist in communities across Texas and around the world. While the empty containers and wrappers can pose a danger to the water quality, as well as plant and animal life, many of these containers may hold household cleaning supplies, prescription drugs, motor oil, fertilizers, etc. All of these substances can make their way into the water supply when allowed to leak into the environment.

The second image shows a person spraying pesticides on rice plants. Many farmers use pesticides to keep insects and other small animals from destroying their crops. How do we know it is pesticide and not water? Observe the mask the person is using. These types of masks are for spraying chemicals to prevent people from breathing in hazardous materials. Many of these pesticides contain dangerous chemicals. These chemicals wash away during rainstorms and flow into our water supply.

The third image is a cow drinking in a river. This image seems innocent enough, right? The river the cow is drinking from is the Thames River, near London, England. This river provides two-thirds of the drinking water for the city of London. The river is quite large, so one cow standing in the river does not make a big difference. When the demand for beef increases, hundreds, if not thousands, of cows drink from and defecate in or near the river. Bacteria levels in the river can increase when this occurs. In extreme cases, the water becomes undrinkable. Pesticides and fertilizers are used upstream by farmers and communities to increase crop production and make lawns beautiful. If it rains, these wash off the land and travel with the water into the river. The cow drinks water contaminated with these chemicals. Plants along the river pull contaminated water in through their roots, and the chemicals enter the cells of the plants. If the cow eats a plant, it ingests the chemicals as well. They are absorbed into the cow's cells as it breaks down the plant for energy. Can you guess what happens when you eat the beef from the cow? That is right. You ingest the chemicals from the cow, which came from the plant, which came from the water. It is all connected.

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The fourth and final image is of two farmers emptying bags of fertilizer into a spreader. The farmers will drive the tractor around their cropland dropping the fertilizer to help increase the size of their plants and therefore the amount of food those plants will produce. If they are not careful, farmers can apply too much fertilizer. If there is too much fertilizer, plants are not able to use it all, and the rain washes it away or it soaks into the ground with the water. The fertilizer will move past the plants' roots and deep into the groundwater. Notice the masks the farmers are wearing. Fertilizers contain high levels of the elements phosphorus and nitrogen, which can be harmful. When these fertilizers wash away into rivers, lakes, streams, and oceans as runoff, they can cause larger-than-average blooms of algae. The greater the growth of algae on the top of the water, the more difficult it is for sunlight to get to other plants below the surface. Too little sunlight and the plants will die. When the plants below the algae die off, then the amount of oxygen in the water decreases. The algae draw in many microorganisms to feed, and they remove oxygen from the water while breaking down their food for energy. This further depletes the amount of oxygen in the water in a specific area. Eventually, there is so little oxygen in the water, other organisms can no longer survive. When this happens within aquatic environments, that area is called a "dead zone."