"Where Does Your Water Shed?"

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Where Does Your Water Shed?

Mary Mary quite contrary,
How does your garden grow?
With silver bells and cockle shells
And pretty maids all in a row.

Mary Mary quite contrary,
But where does your water shed?
Down the hill, across the field,
and into the little creek bed.

Have you ever really stopped to think about where the water sheds after a big rain? It doesn't all just soak up into the ground. Water runs off into ditches or creeks, and then dumps into larger rivers or lakes. This water shed can be carrying many different things, from trash on the ground to chemicals and fertilizers off of fields. The possibilities of pollutants from this water runoff are very high. According to the EPA (Environmental Protection Agency), the leading source of pollution in surface drinking water supplies is polluted rainwater runoff. (Briney, 1) Where our water and the many possible pollinates shed is a huge problem that we as farmers and citizens must be aware of. We must first identify what is our water shed, and where does all of the water go. Second, we must decide what is in our water shed that is traveling into those streams and creeks along with our water. Once we have identified our problem, we can work to find that solution to preventing pollutants from getting into our clean water shed.

What oh what is a water shed?

The path water takes of least resistance, until it untimely reaches its final body of water. The water from a watershed comes from precipitation that builds up on the surface and groundwater. Not all of the precipitation leaves through the watershed, though. Some of it evaporates or transpires, gets used by people, or is soaked up into the ground. There are drainage divides at the boundaries of watersheds. These are usually in the form of ridges or hills. There are three main types of drainage divides: continental divides, major drainage divides, and minor

drainage divides. In a continental divide water on each side of the divide flows into different oceans. In a major drainage divide the waters on each side do not meet from the same river or stream, but they end up reaching the same ocean. In a minor drainage divide, like the Mississippi and Missouri Rivers, water separates at the divide but later joins back together (Preventing Water Pollution, 1).

After that big rain Mary Mary's garden was growing bright and green,
But how many pollutants left Mary's yard and ended up in the stream?

Many of those pollutants are found in things we use every day. Cleaning chemicals used in our house, oil and gasoline put into our vehicles, pesticides and fertilizers used on our lawns, and medicines or pharmaceuticals are some commonly used things that you may not even think of becoming potential pollutants (Briney, 1).

Industrial agriculture is a leading cause of water pollution in the United States. The EPA conducted a test in 2000 which identified agricultural activity as 48% of the pollution in stream and river water, and 41% in lake water (The Issues, 1).

Lagoons can be a bigger problem than you think. Many farmers, just like Mary, put animal waste in lagoons, but don't realize that they can often leak and even overflow during storms. When lagoons leak they release antibiotic residues and harmful bacteria that can get into water supplies. Industrial farms usually spray manure onto fields as a fertilizer, but once it has used as much as is needed, the extra waste runs off into any nearby water systems. Excess levels of nitrogen or phosphorus are some of the most common forms of water pollution in the United States. Both are largely produced by fertilizer runoff (The Issues, 1).

Some of the nutrients, like nitrogen and phosphorus, are needed for plant growth. The problem is, too much nitrogen and phosphorus are added to fields and not enough are removed by crops because of over-fertilization of cropland. The extra nutrients in the water can actually

cause harmful plant growth. This is commonly called "algal bloom," which can cause fish to die (The Issues, 1).

Did you know that runoff from farms is the leading source of impairments to surveyed rivers and lakes? NPS pollution, or nonpoint source pollution, is different than point source pollution that would come from industrial and sewage treatment plants. NPS pollution comes from many different sources. It can be caused by some agricultural activities including poorly located or managed animal feeding operations, overgrazing, plowing too often or at the wrong time, and improper, excessive, or badly timed application of fertilizers, pesticides, and irrigation waters. The 2000 *National Water Quality Inventory* reported that agricultural nonpoint source pollution is the leading source of impacts on water quality in rivers and lakes, the second largest source of pollution and impact to wetlands, and a very large contributor to the contamination of tested ground water (Protecting Water Quality, 1).

Farmers and Mary work hard every day.
Being conservationist to the land is the educated farmers' way.

Because of all the pollution from farms, many farmers are finding ways to prevent it and keep the water clean. If they are able to with the weather, they can empty manure storage ponds before winter to make sure the ponds don't overflow during a wet spring or winter. Farmers need to avoid manure spills on the ground and around barns where it could drain into waterways. They can try to prevent their land from sloping towards waterways and do not allow cattle or other animals to stand in streams. Manure shouldn't be spread during or before you know it's supposed to rain, on steep hills, or in areas that are close to ditches and streams (Preventing Water Pollution, 1).

There are many simple things we can do every day to help prevent water pollution. For starters, be careful with what you put in your sink or toilet. Don't put paints, oils, or other forms

of litter down your drain. Be extra careful that you don't overuse pesticides and fertilizers. This helps prevent runoff into nearby water sources. You can prevent fertilizer, pesticides, and contaminated water from running off into nearby water sources by having more plants in your garden. Another huge way you can help prevent water pollution is by not littering! If you're spending a day at the lake, river, or beach, don't be lazy and leave your trash on the ground. By throwing your trash away and picking up other trash you see laying on the ground, you can help prevent water pollution (What Can You Do, 1).

Audrey, Audrey dressed in blue,
Where does your water go when it is through with you?
Down the hill past grandma's farm
Into Salt River with no harm.
It then drains into the Mark Twain Lake,
Where I love to swim for heaven's sake
The run off is clean, if we all use our head,
I've done my part to help clean my water shed

In this speech, the public will be educated about water sheds and the importance of keeping your water clean. I, Audrey Vitt, certify that this is my own work and that I have performed all research on my own. I hope that you learn something new and enjoy this speech.

Audrey Vitt

Stephanie Eckler

Josh Bondy

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