Clean Water Blues

By Susan Camp

My husband and I arrived home yesterday after a terrific weekend with old college friends at a resort in Wrightsville Beach, North Carolina, just outside of the beautiful city of Wilmington.

The usually pleasant drive down Highway 17 catapulted us into an alien world. We encountered flooded woods, farmers' fields and yards, even some closed roads. Hurricane Matthew had left a path of devastation in his wake.

We are no strangers to coastal flooding in eastern Virginia. Indeed, some areas flood with a hard rain. Jim and I, like many of you, have survived nor'easters and hurricanes like Isabel, but what I saw this weekend affected me differently because I viewed the destruction as an outsider. I wasn't concerned about our downed trees, or whether the water from the creek would get up to the house.

Instead, I saw the flooded fields and trees from bridges over the Chowan, Tar, Trent, and other rivers and I became aware of the far-reaching effects, not just of the water itself, but of the farm and garden chemicals, human and animal waste, carcasses, and other pollutants that would enter the creeks, rivers, and groundwater of the region, creating an impact that could last for many decades. This morning I read in a Washington Post article that thousands of hogs and millions of chickens had perished in the hurricane and subsequent flooding.

How can we, as responsible stewards of this planet, work to reduce damage that occurs when natural events wreak havoc on an area? Certainly, we can clean up the mess after the disaster and build safer dams, levees, bridges, and buildings. We can work individually and with our communities to prevent pollution of our waterways, upon which many of us are dependent for livelihood, recreation, and transportation. We can protect the groundwater, which fills the wells that provide many of us on the Middle Peninsula with drinking water.

Groundwater is defined in the Virginia Cooperative Extension Publication (VCE) 426-059 "Groundwater Quality and the Use of Lawn and Garden Chemicals by Homeowners" as water that enters the soil as rainfall or from irrigation. The water that does not evaporate or absorb into plant roots slowly percolates, moving down through the soil layers until it reaches the water table, where it moves into an aquifer, or saturated zone. Underground aquifers supply the water to our wells, which we use for drinking, cooking, and bathing. Clean, pollutant-free water is imperative.

A few decades ago, scientists thought that pesticides, fertilizers, and other chemicals and waste products were not carried down through the layers of soil, but research has demonstrated that pollutants do contaminate the water in the saturation zone. Groundwater moves slowly and

decades may pass before pollutants are significantly diluted or removed and water quality returned to its natural state.

The Virginia water antidegradation policy (Code of Virginia, Section 62.1-44.4(2) declares, in essence, that neither individuals nor corporations have the right to degrade Virginia's water from its natural quality, nor can groundwater be pre-classified to permit degradation. Anyone responsible for groundwater pollution can be required to return it to its earlier quality. Finally, economic and social consequences must be taken into account when groundwater must be protected.

Numerous publications are available on the VCE website related to protecting groundwater and our waterways, including Publication 426-128 "Best Management Fact Sheet 9: Bioretention." Bioretention cells, also called rain gardens, are shallow depressions planted with varieties of trees, shrubs, and other plants to help remove pollutants from stormwater runoff. Rain gardens often are used in urban areas for stormwater draining from highways, parking lots and pavements, but smaller rain gardens can be built by individual property owners. Publication 426-723 "Home Landscape Practices to Protect Water Quality" offers suggestions for decreasing pesticide and fertilizer usage and reducing erosion.

We were fortunate to have received little damage on the Middle Peninsula from Hurricane Matthew, but we need to remain proactive in protecting both our waterways and out groundwater.

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