

A Watershed Way of Thinking

By John P. Brunner

Nearly sixty years have passed since Clayton Hoff stood on the banks of the Brandywine River, not far from its confluence with the Delaware River, and wondered how his favorite stream had become so polluted.

Hoff's curiosity about what was going on miles upstream led him to the brilliant yet simple concept: the people of a particular river valley are the ones most likely and able to care for it. And that is how Hoff came to found the world's first watershed association in 1945. The Brandywine Valleys Association is still going strong as the primary citizens group working to protect the largest watershed in Chester County, Pennsylvania.

Let's face it, everyone lives in a watershed, but too few people know what a watershed is. The term watershed refers to the geographic boundaries of a particular water body, its ecosystem, and the land that drains to it. A watershed also includes groundwater aquifers that discharge to and receive discharge from streams, wetlands, ponds and lakes. Large watersheds are sometimes referred to as river basins. Small tributary watersheds are often referred to as subwatersheds. Every river system begins in the mountain headwaters and ends in a coastal plain estuary. If you live along the Lackawaxen River you are directly connected to the people living three hundred miles downstream in the village of Shellpile along the Delaware Bay. We are all citizens of a watershed.

Scientists such as those at the Philadelphia Academy of Natural Science - Stroud Water Research Laboratory have shown that certain key elements within the watershed ecosystem require special care. These include the stream corridors, floodplains and wetlands that filter out pollutants, reduce flooding and provide groundwater recharge. Equally important are the headwater streams that provide a continuous flow of cold, clean water, and the natural landscapes that slow down and absorb stormwater and provide groundwater recharge.

It's not as if watershed associations invented the watershed concept. As far back as 1890 the U.S. Inland Waterways Commission reported to President Theodore Roosevelt that each river from its mountain headwaters to its mouth at the coast is an integrated system, and must be treated as such.

In response to the "dust bowls" of the early 1930's the USDA Soil Conservation Service (now the Natural Resources Conservation Service) was created in 1935 to implement measures to control water runoff and soil erosion. They were the first to apply a watershed approach to conservation planning. Soil conservationists understood that in order to effectively protect water quality and water quantity it is necessary to consider the entire watershed ecosystem.

Watershed associations took the approach used by the soil conservation community and added a grassroots element espousing local stewardship for natural resources. Inclusive in nature,

watershed associations want to work with everyone in the watershed, from tree huggers to sewage plant operators.

Clayton Hoff started a movement that spread throughout southeastern Pennsylvania, New Jersey, and eventually around the world. The Upper Raritan Watershed Association and the Stony Brook-Millstone Watershed Association were formed just a few years after Hoff's group. The South Branch Raritan, Wissahickon, and Perkiomen (my home watershed) watershed associations were formed by the mid-1960's. Over the next few months I will help a few determined individuals give birth to the Lopatcong Creek Watershed Association, so the movement continues.

The Musconetcong Watershed Association (MWA) was formed just ten years ago. MWA takes the position that since environmental quality has everything to do with land use, and land use decisions in "home-rule" states like New Jersey are made primarily at the local level, that is where we focus limited resources.

The Musconetcong Wild and Scenic River study and the state watershed planning initiative are the two main vehicles through which MWA is working with local municipalities. MWA is also concentrating on local schools with a watershed education program that integrates science, geography and history with a study of the Musconetcong watershed. The goals of the education program for children, landowners and municipal officials alike are to raise awareness about the unique features of the watershed, and help people understand the relationships between land and water.

The Musconetcong River watershed encompasses a 157 square mile area that extends from the mountainous terrain above Lake Hopatcong to the Delaware River at Rieglesville. The Musconetcong River meanders through farmlands, woodlands, one medium sized town, and several historic villages. The river is also the boundary water between Hunterdon, Morris, Sussex, and Warren Counties, and the watershed encompasses all or portions of 25 local municipalities.

That the natural boundary of the Musconetcong watershed is sliced and diced by so many political subdivisions makes it all the more difficult to protect the river. It is MWA's challenge to present a vision to the people of the watershed that clearly states what needs to be done to protect and improve the river, and to facilitate cooperative efforts across municipal boundaries and property lines to ensure success.

MWA is identifying those lands along the river and its tributaries that are most vulnerable to development. These areas will be protected through a prioritized land acquisition and conservation easement program. Public access lands along the Musconetcong deserve a management plan that establishes prioritized areas for restoration activities. This means wherever possible reestablishing forested buffers along the waterways and wetlands. A management plan must also address a host of recreational issues such as identifying areas that are more suitable for intense use, while protecting ecologically sensitive areas from inappropriate land uses.

The MWA mission is urgent as the Musconetcong valley is unfortunately situated in the path of sprawl development. The prime agricultural soils of the lower Musconetcong present relatively few constraints for development. The river is already showing the effects of increased runoff from roads, roofs and parking lots in the form of streambank erosion and streambed scouring. MWA is doing all it can on a variety of fronts to help ensure that the river and its watershed are not further degraded. But we can never do enough. We need your help.

As with all nonprofit organizations, MWA is constantly seeking new members. The more members we have the stronger are. Our membership represents that small but growing segment of the population that cares enough about the river and its watershed resources to support the activities of the watershed association. It matters not whether one lives within the watershed. Everyone who uses the river for any purpose, be it fishing, boating, or whatever has a clear interest in helping MWA.