

HOW ABOUT STORMWATER?

When it rains, the runoff from our homes, driveways, sidewalks, streets, businesses, schools, and farms flows downhill picking up pollutants along the way. Runoff carries not only trash and topsoil, but fertilizers, pesticides and herbicides, animal waste, oils, heavy metals, and other pollutants. It carries our cigarette butts, detergents from car washing, wastes from our pets and other chemicals and bacteria harmful to the life of streams. These pollutants wash into our neighborhood creeks and downstream to the Monocacy, Potomac and the Chesapeake Bay.

Creating stormwater management ponds and other types of facilities in recently developed areas helps to settle and filter some pollutants before water flows into our streams. Stormwater management facilities have different designs; some are dry and others hold water. Most of our older



Precious Barnes, a student at TJ Middle school, examines stream life during National Water Monitoring Day.
Photo Courtesy of Shannon Moore

communities do not have any facilities. Frederick County checks on how facilities are working, assesses priority watersheds, develops stream restoration projects, monitors water quality and does other tasks under current regulations. The Maryland Department of the Environment monitors the County's work. For more information on the county's work to protect the watershed from stormwater impacts, go to www.co.frederick.md.us/cleanstreams.

HOW IS YOUR WATERSHED CHANGING?

What kind of changes have you seen in your watershed recently? Do you notice fewer dairy farms? Are there more protected parks or farm lands? Do you have more neighbors than you once did? More schools or businesses? Are you as comfortable fishing or swimming in area creeks now as you once were? Do you feel the natural resources in your area are valued, protected, and enjoyed?



By protecting the Monocacy watershed, we also preserve the rural character treasured by new and old residents alike.
Photo Courtesy of Kai Hagen

STEERING COMMITTEE

Audubon Naturalist Society of Central MD • Carrollton Manor Land Trust • Catoctin Land Trust • Citizen representatives • City of Frederick • Community Commons • Emmitsburg Business and Professional Association • Fort Detrick • Frederick County Government • Frederick Forestry Board • Friends of the Lake • Hood College • Interstate Commission on the Potomac River Basin • Lake Linganore Conservation Society • Maryland Department of the Environment • Maryland Department of Natural Resources • Natural Resource Conservation Service • New Forest Society • Potomac Conservancy • ThorpeWood • Town of Emmitsburg • Western Maryland RC&D • and others.

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WRAS

Watershed Restoration Action Strategy

MONOCACY RIVER

FREDERICK COUNTY, MD

WHAT IS A WATERSHED?

A watershed is an area of land that drains to a specific body of water – a stream, river, lake, bay, or wetland. It can be as small as a backyard or as large as the entire Chesapeake Bay watershed, 64,000 square miles, with parts of Maryland, Delaware, Virginia, West Virginia, Pennsylvania, the District of Columbia and New York. Watersheds are defined by natural topography (mountains, valleys) and hydrology (the water cycle), and often cross political or jurisdictional boundaries.

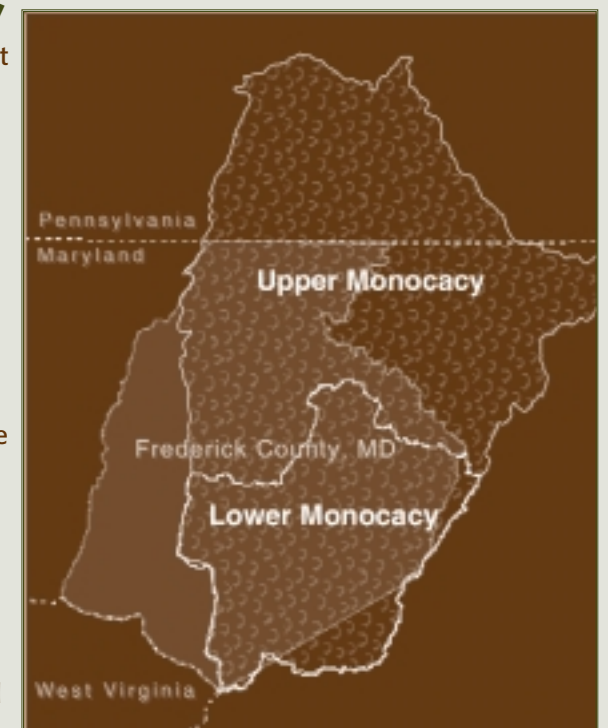
PLANNING INITIATIVE

The goal of this initiative is to develop a multifaceted strategic plan for the protection and restoration of the Monocacy River watershed through partnerships of private and public participants.

PROGRAM OVERVIEW

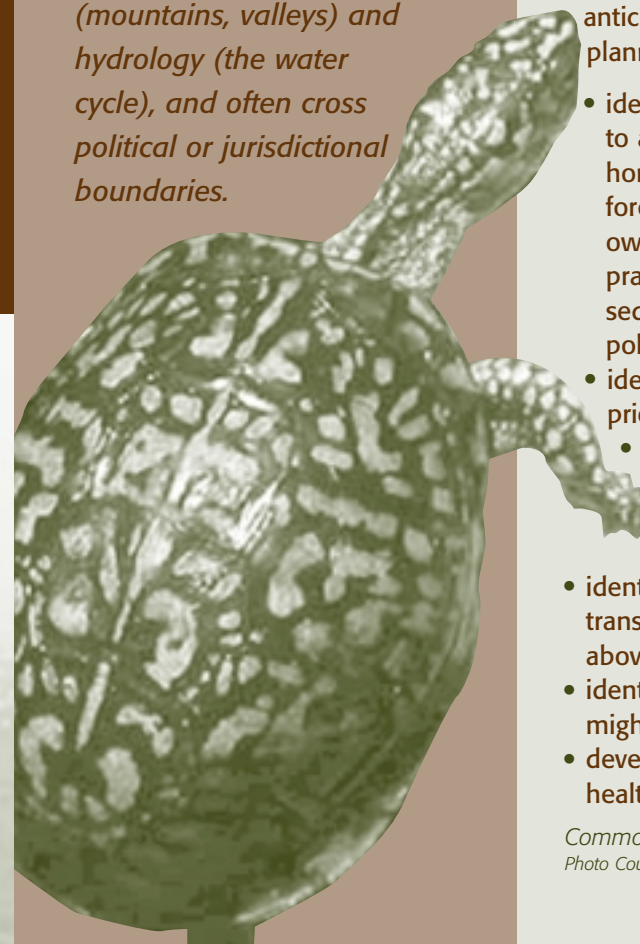
Frederick County, through a grant provided by the Maryland Department of Natural Resources, and with support of a broad base of stakeholder groups, is coordinating a strategic planning initiative for the Monocacy River watershed. This strategic plan will provide guidance to citizens, government agencies, and other interested groups for the conservation and restoration of the Monocacy River watershed. The anticipated outcomes from this planning initiative include:

- identifying program initiatives to assist developers, homeowners, farmers, foresters, and institutional land owners to improve their practices so as to reduce sediment, nutrients, and other pollution in the watershed;
- identifying priority sites to increase vegetation along tributary stream banks with priority to stream corridors without vegetation and with soils that erode easily;
- identifying sites for Frederick County Government to restore as part of its commitments to the national Clean Water Act and the Chesapeake Bay Agreement;
- identifying priority sites for wetland expansion or restoration;
- identifying means of restoring stream stability to reduce excessive sediment transport and deposition, with priority to Linganore Creek and tributary streams above Lake Linganore;
- identifying key fish blockages for removal and streams where native brook trout might be reintroduced; and
- developing a volunteer monitoring program to help assess changes in stream health.



The Monocacy Watershed

Common Eastern Box Turtle
Photo Courtesy of Kai Hagen



THE CHALLENGE



New development in the Monocacy Watershed can preserve its quality and character. How could this development have been designed to better protect the watershed? What can be done now that it is in place?
Photo Courtesy of USDA-NRCS

determined that the Monocacy River watershed needs both restoration and protection to meet water quality and habitat needs. As the map illustrates, the Lower Monocacy watershed is primarily in Frederick County but includes small parts of Montgomery County as well. The Upper Monocacy watershed includes portions of Adams County, PA and Carroll County, MD.

The Monocacy basin, located primarily in Frederick County's fertile agricultural region, is rich in history, cultural heritage, and natural resources. The area is also confronted by complex water resource problems that negatively impact the quality of life for area residents and the health of the Chesapeake Bay. Some of the most challenging resource problems are poor water quality due primarily to sediment and nutrients from agricultural lands, atmospheric deposition from fossil fuel burning engines, practices by residential, commercial, and municipal development, high proportions of soils that erode easily, and the exploding population growth in the area and rapid land use conversion. For the past few decades, various groups have undertaken initiatives to address water quality issues, and although progress has been made, only partial success has been achieved.

The 1998 statewide assessment of watersheds

PROJECT HISTORY/BACKGROUND

Frederick County received its first WRAS grant from DNR in January 2003. A Steering Committee with broad representation was organized in January 2003 and began meeting. Over the course of the year, the open Steering Committee membership has grown to more than 40 representatives of many different areas and stakeholder groups from the Frederick Forestry Board to the Audobon Society of Central Maryland, from the Carrollton Manor Land Trust to the Lake Linganore Conservation Society, from Hood College to the City of Frederick.

The County also received DNR staff services to develop three reports. The first report was a summary of existing data on water quality, landscape and living resources called the Watershed Characterization and can be found on DNR's web site at <http://www.dnr.state.md.us/watersheds/surf/proj/wras.html> In addition, DNR staff collected water samples at selected sites and analyzed water quality submitting a "Synoptic Survey" and report showing nutrient yields and concentrations at 96 locations in the watershed. They also walked 75 miles of stream corridor in the Upper Linganore and Bennett Creek watersheds, and assessed stream corridors on Town, Woodville, and Talbot Branches in Upper Linganore and

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Bear, Fahrney, North, Pleasant, and Urbana Branches in the Bennett Creek watershed. Data from the stream walks, called the Stream Corridor Assessment, was analyzed and shared during October 2003.

WRAS outreach work during the 2003 spring and summer included a Greener Lifestyle workshop series offered county-wide by Community Commons with workshops on native plants, rain gardens, rain barrels, composting, natural household cleaners, and natural lawn care practices. Another similar series will be offered during 2004.

Once underway with the planning and data gathering process in the Lower Monocacy region, Frederick County applied for funding for the Upper Monocacy in June 2003. The grant was approved in August 2003 and services began during late fall 2003. A Steering Committee for the Upper Monocacy watershed was organized in September 2003 and continues to expand its membership.

The WRAS Plans, anticipated in May 2004 for the Lower Monocacy and June 2005 for the Upper Monocacy, will not be static documents, but dynamic in nature. The plans will continue to mature and evolve over time as new information and ideas are added and projects and programs are implemented.

WHY CARE ABOUT YOUR WATERSHED?



One of the many recreational uses of the streams and rivers within the watershed.
Photo courtesy of Kai Hagen

prevent the pollution in the first place. And although healthy drinking water is critical, we also want healthy streams for recreational use: for boating, fishing, swimming and creative, safe natural play areas for our children.

Good quality streams depend upon healthy vegetated stream corridors that limit erosion, provide shade, contribute leaves and woody debris for aquatic animals, and help filter out soil and pollutants from surrounding residential or agricultural lands. Water is for drink, for play, for life pleasures and for the survival of the aquatic community from the crayfish and mayflies nearby, to the bass and sunfish in the rivers and the blue crabs and oysters in the Bay.

Although you and I do not live off the land like our ancestors did, we are nonetheless utterly dependent upon healthy water and good soil. Safe drinking water is a necessity of life. Since community drinking water comes from the Monocacy and Potomac Rivers, Lake Linganore and wells throughout the County, the more pollution that must be removed, the greater the cost to everyone. It is much less expensive to

WHAT ABOUT UNDERGROUND WATER?



A stream in the Lower Monocacy River Watershed without a vegetated buffer.

Those of us who have our own wells or use public water from community wells depend upon underground water. This underground water is replenished from rain that soaks in and fills spaces between soil particles and rocks underground like water fills a sponge. Adequate groundwater helps keep our streams flowing during droughts. Unfortunately, pollution can leach into groundwater and eventually flow into our streams causing much harm to aquatic life. With increasing development and pavement, pastures and lawns, rainwater runs off the land at a faster rate than from forested lands, gouging out stream banks and not replenishing into our ground water.

VISION STATEMENT

We envision a broadening and deepening stewardship ethic among an informed citizenry, which will help protect the County's agricultural heritage and rural character, maintain and improve the quality of life, protect and treasure our natural resources, and manage future growth more wisely. We envision healthy streams and rivers with forested buffers supplying clean drinking water and supporting healthy communities of aquatic and terrestrial life, as well as diverse and popular recreational uses.

We envision a healthy and vibrant agricultural community built on links with citizens who support local agricultural and renewable forest products. We envision increasingly concentrated residential development using conservation design principles with access to collective transportation modes and a web of well maintained trails.

We envision watershed conservation folks from all sectors and communities collaborating to implement effective conservation and restoration practices and foster a creative stewardship consciousness.

Lower Monocacy Steering Committee

Area resident joins others to clean up trash along a local stream.
Photo Courtesy of Shannon Moore

