

# Agricultural Working Group Fact Sheet: Upper Hazel River Watershed TMDL Implementation Plan, Counties of Culpeper, Madison and Rappahannock, VA

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## **Why Do A TMDL Implementation Plan?**

Water quality monitoring conducted by the Virginia Department of Environmental Quality (DEQ) has shown that streams within the Upper Hazel River Watershed have levels of bacteria that exceed state water quality standards and are therefore considered “impaired” by bacteria. This means that people face an increased chance of gastrointestinal illness or infection during primary contact with the water. The development of a TMDL implementation plan is required by Virginia’s Water Quality Monitoring, Information, and Restoration Act, which directs DEQ to “develop and implement a plan to achieve fully supporting status for impaired waters.” Implementation plans provide communities with framework for restoring water quality in their watershed, and often provide opportunities to receive funds for restoration efforts from several sources including federal and state government.

## **How Can I Participate?**

One of the primary means of public participation in this TMDL implementation plan process will be through three working groups: agricultural, residential and government. Citizens may also serve on a steering committee, which will help to guide the overall implementation plan development process. The working groups provide citizens with a venue for active participation in the planning process. Each working group will report their ideas and recommendations to the steering committee for consideration to be included in the implementation plan. Strong public participation in these groups ensures that the final implementation plan reflects local concerns and ideas with regard to water quality.

## **What will the Agricultural Working Group address?**

The Agricultural Working Group will address the sources of bacteria that can be attributed to agricultural operations. The group will focus on identifying obstacles to implementation of best management practices to reduce bacteria coming from agricultural operations, and practical solutions to these obstacles. Reductions in bacteria coming from agricultural operations can be achieved by decreasing direct deposition of fecal matter in the streams by livestock and reducing the amount of bacteria being carried across the land to the stream network during storm events.

The group will focus on the following tasks:

- Identify constraints to the implementation of best management practices
- Consider alternative best management practices that are both effective and more affordable for the participants
- Identify alternative funding sources/partnerships that will promote implementation
- Identify appropriate staged measurable goals (e.g., 50% of stream fenced, 50% of water quality violations reduced)
- Identify timeline for achieving implementation goals
- Review implementation strategies from an agricultural perspective

## **Who makes up the Agricultural Working Group?**

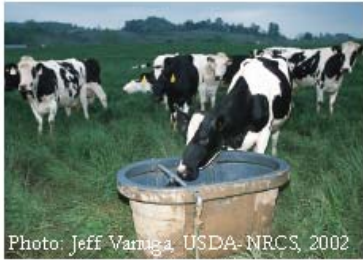
Agricultural working groups typically consist of farmers and landowners, local citizen organizations, and local, state and federal agency representatives.

**Questions?** Contact May Louise Sligh, VADCR, phone: (804) 443-1494

VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION

# Agricultural Best Management Practices to Reduce Bacteria

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## **Grazing land protection:**

Provide livestock water systems and fencing that will improve water quality by establishing rotational grazing to control erosion. This practice includes stream fencing and a 35-foot streamside buffer, which will reduce bacteria entering the waterway by filtering runoff and by eliminating livestock access to the water so that direct deposition of waste cannot occur.

## **Woodland buffer filter area:**

Establish a wooded buffer along streams to protect streambanks and to filter runoff from surrounding land carrying bacteria and other pollutants like excess nutrients and sediment. This may include planting streamside trees and shrubs, and temporary grass cover until the trees and shrubs have become established. This practice is designed for cropland and pastureland that has been in production two of the past five years.

## **Loafing lot management system:**

Loafing lots that are used for herd exercise and loafing can become denuded and harbor undesirable plants. Installing loafing lots and rotating cattle from lot to lot will help to maintain vegetative cover and prevent manure and sediment runoff from entering watercourses.



## **Animal waste control facility:**

Provide a facility for the storage and handling of livestock waste in order to allow waste to be stored until the appropriate time for application. This practice reduces the transport of bacteria to watercourses in runoff after manure has been applied. Producers may wait to apply manure until a time when the nutrients needed by plants to grow will be retained in the soil rather than running off into the stream.



## **Stream protection:**

Install streamside fencing with a 35-foot buffer and limit livestock access to streams at hardened crossings. This practice is designed to eliminate direct deposit of waste by livestock to watercourses, thereby reducing bacteria loads into the water. In addition to the installation of fencing and stream crossings, this practice may include a streambank stabilization component using grading, shaping and vegetative work in order to provide vegetative stabilization of the streambanks.

## **Improved pasture management:**

Enhancement of the grazing land management including maintenance of an adequate forage height during the growing season, application of lime and fertilizer according to soil test results, mowing of pastures to control woody vegetation and distribution of manure through managed rotational grazing. This practice helps to control runoff of manure from pastureland to watercourses.