Cost-Share Money Available in Pond Creek Watershed

Local Soil Conservation Districts (SCD) will be accepting applications for cost-share funds on Best Management Practices for land in the Pond Creek Watershed. Best Management Practices are measures that control erosion, manage animal waste, and/or maintain or improve water quality. Examples of funded practices are:

- Watering systems
- Heavy use areas
- Cropland conversion to permanent cover
- Cross fencing
- Stream crossings
- Critical area stabilization

The funds are provided through a grant from the Tennessee Department of Agriculture's Ag Resources Fund. The Loudon County Soil Conservation District currently has a limited amount of cost-share funds to assist landowners in the Pond Creek Watershed this year. Applications for Loudon County are being taken on a first-come basis until the funds are exhausted. Remaining applications will be retained and used to apply for future cost-share funds.

Please call you local SCD office at the numbers below to obtain an application.

- Loudon County residents call 865-458-2306
- McMinn County residents call 423-745-6300, extension 3
- Monroe County residents call 423-442-2202, extension 3

Lena Beth Carmichael
107 W. College Street
Athens, TN
37303-3502

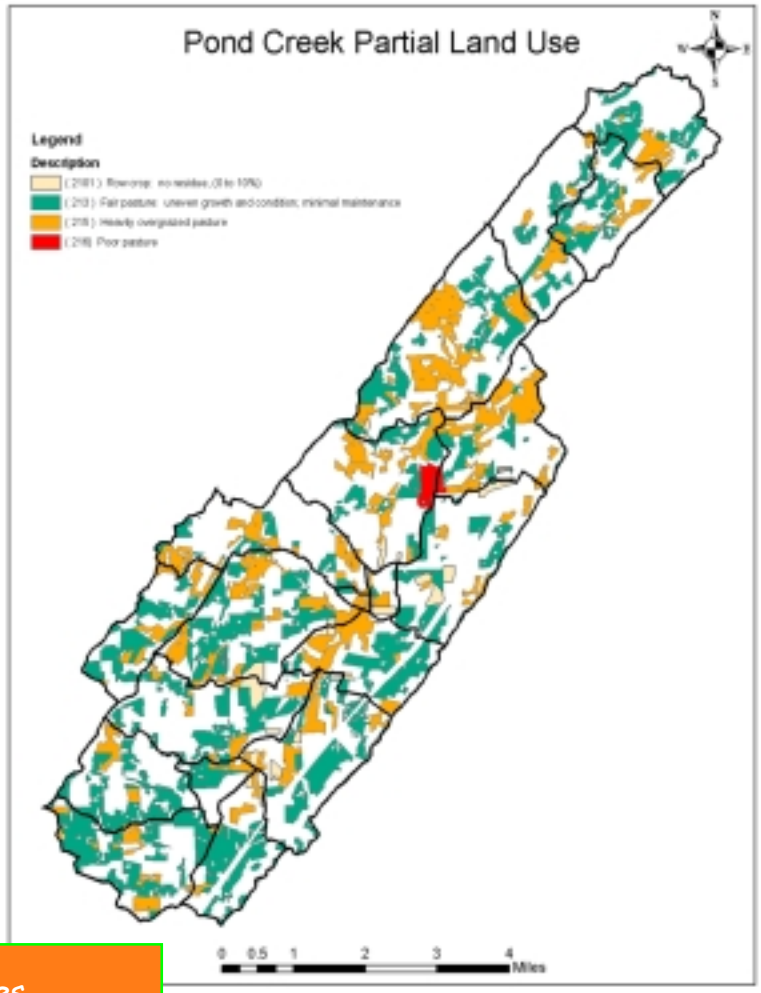
UT Extension

Pond Creek Watershed

Spring 2005 News for Watershed Residents

Two Major Culprits

In December, all Pond Creek watershed residents received the Fall 2004 Pond Creek Watershed newsletter, which introduced everyone to the water quality improvement project, and to some of the major threats to water quality in your watershed. In this edition, we discuss some of the probable sources of the pollutants (pathogens & nutrients) identified by the state. The good news is there are some relatively simple practices that can be used that will have a significant impact on reducing the release of these pollutants into the water.



The potential sources of the pathogens & nutrients that are impacting water quality in Pond Crek are numerous and varied. Both of these pollutants can come from either man-made or natural sources.

- Potential disease-causing organisms (or ***pathogens***) can come from humans (from leaking septic systems), from agricultural livestock and even wildlife.
- ***Nitrate*** is a natural plant nutrient that comes from either fertilizers or the decomposition of organic matter.

Strategies

Before we can improve water quality in Pond Creek, we must identify the major sources of pathogens & nitrates, and determine how they're getting into the water. There are no major industrial or wastewater treatment facilities discharging wastes into the creek or its tributaries. More likely, the pollution is from runoff following rainstorms and, more importantly, from soil erosion resulting from runoff. By controlling erosion, the amount of pollutants reaching the creek will be dramatically reduced.

Land Use

In order to formulate a solid strategy, we need to consider how the land is being used. The map, above, details vegetation cover. Using aerial infrared photography, scientists from UT Extension and TVA conducted an

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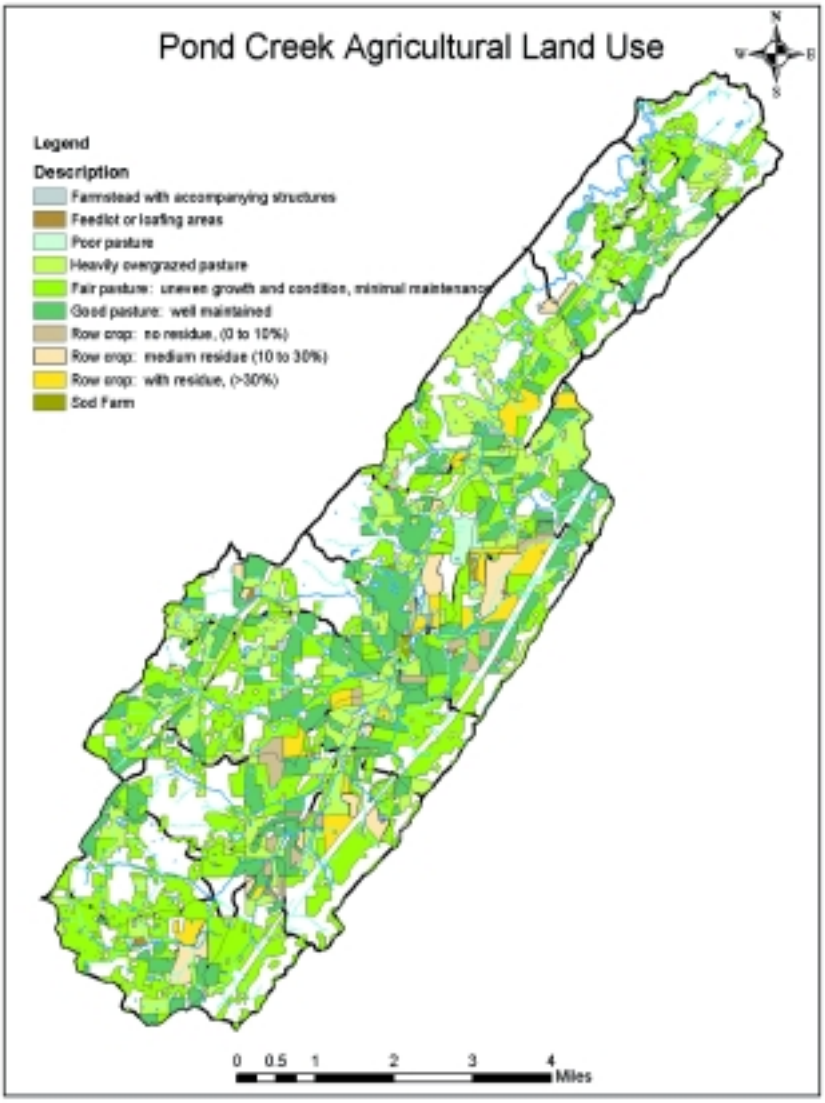
inventory of land use in the Pond Creek watershed. Of the watershed's 23,579 acres, agriculture and forestry are the main land uses, comprising 62 and 29 percent of the watershed. Residential and commercial areas (including roads) were identified as covering only 4 percent of the watershed.



From these maps, estimates of soil erosion losses were calculated using a computer technique called Integrated Pollutant Source Identification (IPSI). Estimates of soil erosion were calculated using a USDA-approved method that takes into account factors such as rainfall, soil type, slope length and gradient and soil cover. The analysis suggests that pasture and hay fields make up over 55 percent of land use. Over 70 percent of the pastures were assessed to be either heavily grazed, poor or only fair, and accounted for nearly half of all the erosion losses in the watershed. ***See map, left.***

Pasture Improvement: a Win-Win Strategy

The take-home message from this analysis is that improvements in pasture management will improve water quality in your watershed. It will reduce the amount of soil that will erode, slow the movement of runoff across fields, and trap more sediments, nutrients and pathogens.

Remember, improved pasture management has economic benefits to livestock producers: Higher forage yields and better forage quality will lead to increased beef and milk production, which means more profits!

Featured Best Management Practice: Pasture Management & Renovation

It is important to establish and maintain a strong stand of forages, regardless of grazing patterns. Pastures with poor forage stands are more susceptible to erosion, livestock damage or weed invasion. A thick, healthy pasture is not only pleasing to the eye, it also allows livestock to more efficiently utilize the forage, and is crucial for the economic stability of any livestock operation.

Soil Testing: "Don't guess...soil test!"

It is very important to have your soil tested before beginning renovation activities. Now is the time to test. With high fertilizer prices, you want to apply only the recommended rates. Some soils may not require additional phosphorus or potassium: You may only need to buy a nitrogen fertilizer, such as urea or ammonium nitrate. Applying 200 or 300 lbs of 19-19-19 fertilizer to pastures often adds unncessary nutrients to soils, increases your costs and may have a negative impact on forage and water quality. Use only the recommendations from the University of Tennessee, as recommendations from out-of-state soil testing laboratories may not be appro-

priate for Tennessee. Soil testing forms can be obtained from local UT Extension offices or the USDA Service Centers. The small fee associated with soil tests will show returns over a long period due to more productive pasture and proper application of fertilizer and lime.

This year, all soil tests from Pond Creek that are handled by UT Extension will be FREE of charge! No catch, just follow the fertilizer recommendations.

Weed Control

Weeds can reduce the productivity of your pastures, reduce the amount of food available to livestock, and increase erosion and soil loss from overgrazing. If you had a weedy pasture field last year, you will have a weedy pasture this year. This is the time of year to control problem weeds like buttercup.

Seeding

When renovating pastures, the recommended seeding dates for cool season grasses (such as fescue) and legumes are August 15th-October 1st in the fall, and February 15th-April 1st in the spring. Once again, the Pond Creek project may be able to provide you with fescue seed this spring.

Livestock must be removed from the renovated pasture for several months to allow for the grasses and legumes to become established. Allowing livestock to graze newly renovated pastures too soon will lead to further expense and require the landowner to renovate on a much more frequent basis.

Rotational Grazing

Rotational grazing is an efficient method for extending the productivity of pastures. The grazing efficiency is increased 40-50 percent by incorporating rotational grazing into the overall farm management. Cost-share dollars are available for the installation of cross-fencing and watering systems to allow for an effective rotational grazing plan. USDA representatives are available to work with landowners in developing a rotational grazing plan, as well as a whole-farm conservation plan. Rotational grazing will allow for stockpiling of tall fescue.

Benefits

- Improved grazing efficiency
- Reduced herbicide cost by forcing livestock to graze more efficiently prior to rotating
- Improved weight gain
- Improved milk production
- Reduced fertilizer expense
- Reduced erosion & topsoil loss
- Reduced equipment expense

Farmer Spotlight

Mr. and Mrs. Marty Bilderback own a farm in the Pond Creek watershed. They are both licensed veterinarians, but are not currently practicing medicine. She farms and he teaches at Hiwassee College. In 1997, they decided to fence their livestock out of the creek, and provide an alternative watering source. Over the last couple of years, they have noticed an improvement in water clarity in the section of Pond Creek that flows through their land. “There has been a noticeable improvement in water quality, due to lower nitrates and phosphates in the water [less algae growth]. The gravel bottom is now visible and mussels are visible in the streambed.” says Bilderback.

Marty Bilderback fenced his livestock out of the creek in 1997.

The Bilderbacks feel that fencing cows out of the creek lowers E. coli and other bacteria counts, which should lessen the chance of calves getting scours and cows aborting from diseases such as leptospirosis.