

Why Develop a Watershed-based Plan for Dry Creek?

Approximately two years ago, a group of citizens complained about an increase in the frequency and severity of flooding on the west end of Morehead and in the Clearfield area. As citizens and local officials began to discuss the issue and possible solutions, it became apparent that no simple, one-time fix exists. In response, the City of Morehead formed a Triplett Creek Committee, which consists of citizens from Morehead and Clearfield; a biologist and geologist from MSU; the Rowan County Solid Waste and Flood Plan Manager; representatives from the USFS, KDFWR, USDA Natural Resources Conservation Service; and the Licking River Basin Coordinator. This committee will serve and assist with the development of the Dry Creek watershed-based plan along with the KWA and the Kentucky Division of Water.

Project Timeline

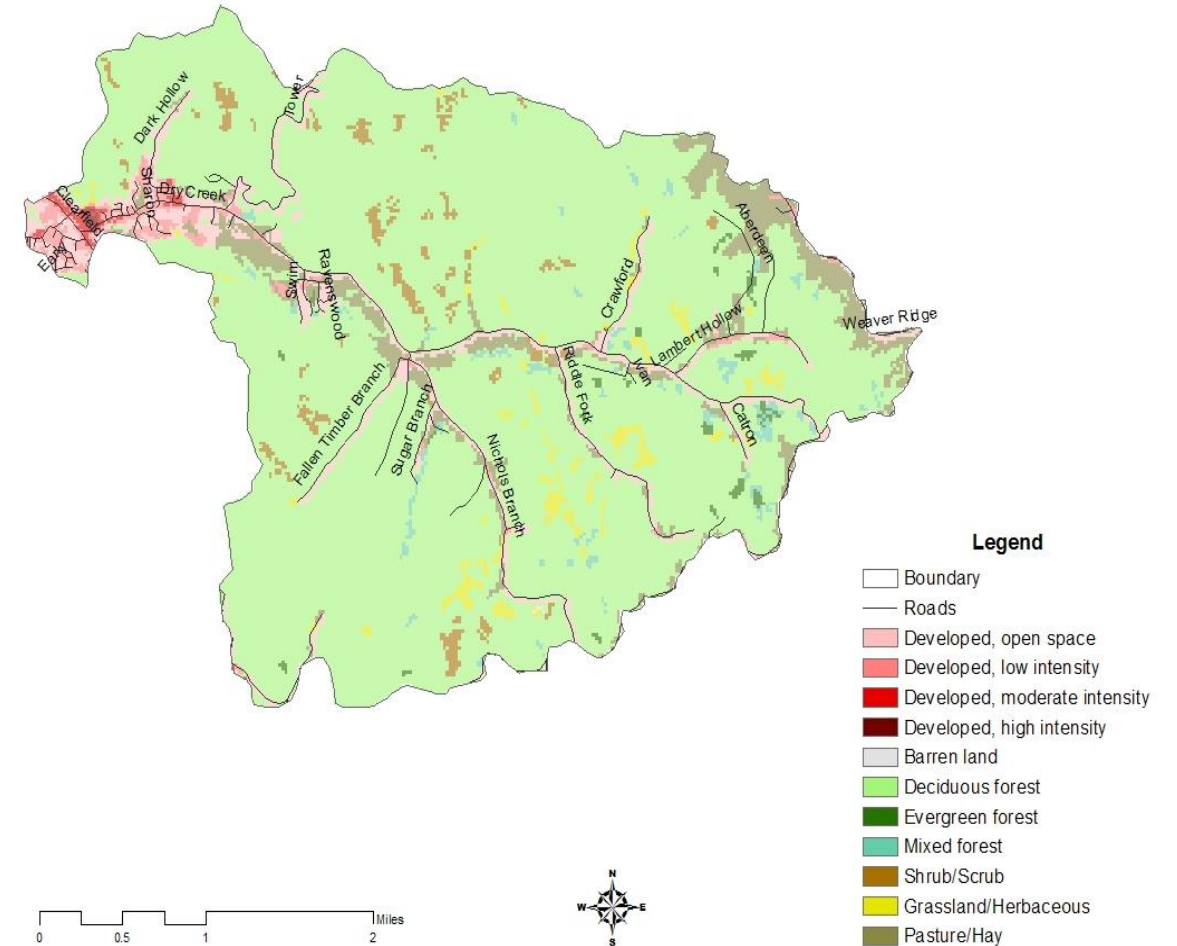
February 2008	Community roundtables
February – April 2008	Comprehensive sampling
February – June 2008	Analysis of all water quality data on Dry Creek
March 2008	Start on the draft watershed-based plan
March 2008 – March 2010	Ongoing meetings to discuss the development of the plan
September 2008	Selection of best management options
February 2009	Second Roundtable
March 2010	Completion of watershed-based plan

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Dry Creek Watershed-based Planning Project



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What is a Watershed?

A watershed is an area of land where all the rain and snow melt flows over the surface or through the soil as groundwater to the lowest point, a stream, lake, river or wetland. The boundary of a watershed is the high points, or ridges, on the land. Watersheds come in all shapes and sizes. Some are hundreds of square miles; others are just a few acres. The smaller watersheds form streams that join together to form a larger watershed. These larger watersheds join together to form even larger watersheds. Very large watersheds are sometimes called basins.

What is a Watershed-based Plan?

A watershed-based plan is a comprehensive study of all the activities and sources of pollution on the land that drains rain and snow melt to a specific stream. The plan identifies information about the levels of pollution and flooding in the stream, the sources of the pollution and the amounts each source contributes. It also includes steps that can be taken to reduce the levels of pollution and flooding and who can take action to perform these steps. Everyone who lives or works in the watershed should participate in developing this plan so that all concerns about the water in the stream are discussed, investigated, and addressed to ensure clean water for everyone to use. The steps in making a watershed-based plan are:

- Identify the causes and sources of the pollution
- Figure out how much pollution is going in the water
- Identify actions and activities that will decrease this pollution
- Identify assistance and funds needed
- Provide public information and education
- Figure out when you're going to do what
- Measure for success

Dry Creek Watershed Description

The Dry Creek watershed is approximately 7500 acres. The watershed is mainly forested with housing development concentrated at the mouth of the creek. Because of the steep terrain, roads and housing are concentrated along the creek. Apartment construction has increased in the area along Dry Creek in recent years. Many of the disturbed sites have not been reseeded allowing for visible erosion. Morehead Utility Plant Board provides sewer lines up to Tower Road.

Known Impairments

Dry Creek is on the state's second priority list for partially supporting aquatic life and pollution by sediment. This designation is based on field work completed, in 2005, by the US Forest Service (USFS) and Kentucky Department of Fish and Wildlife Resources (KDFWR). The Division of Water has collected samples from Dry Creek and determined that it is polluted by sediment (dirt) and sewage. This pollution prevents the creek from supporting all of the aquatic creatures, such as fish and insects that are supposed to live in the water. In the Kentucky Division of Water's 2006 Integrated Report to Congress on Water Quality, Dry Creek is identified as only partially supporting aquatic life.

Water Sampling

Water samples are collected from the creek to find out if it contains pollution, and, if it does, what kind. Samples are collected several times under different conditions to get a clear picture about how clean or polluted the water is. When it rains or when snow melts the water runs over the land and picks up pollution and carries it into the creek. This means there will be more pollution in the creek after it rains or snows. We try to collect water samples when we have normal weather, as well as after it rains or snows. We also collect other types of information from the creek, such as how fast the water is flowing and how much water is moving through the stream.

Water samples are taken to the lab for tests to see if the water has pollution, such as bacteria, sediment (dirt), or nutrients. Too much bacteria in the water can cause diseases in humans, livestock, pets, and other animals. Too much sediment (dirt) smothers out insects, which provide food for fish and other wildlife. Too many nutrients (nitrogen and phosphorus for example – found in fertilizers, sewage, and animal waste) cause too much algae to grow in the water. As the algae die and rot, they take the oxygen out of the water which kills the fish and other creatures that live in the water.

Water Sampling for Dry Creek

Information from water samples collected in 1998 through 1999 and 2007 shows that bacteria and nutrient pollution are high in Dry Creek. We have begun a project to measure the amount of sediment (dirt) getting into Dry Creek and the amount of water flowing in it. The Kentucky Division of Water has collected information that shows the creatures that live in the water aren't being supported very well in Dry Creek. They have included the creek on a list of streams that are polluted that they send to the Environmental Protection Agency in Atlanta every other year.