

Helpful Tips for Using the 'High Priority' Buffers Websites

A guide to supplement the presentation given to local NRCS employees on October 28th, 2005 in Paris, Missouri.

CAUTION: These websites were developed for the purpose of research, education, and exploration only. The content and information contained do not accurately portray all conditions in the real world. Please read the following information before using them, and contact the author if you have any questions, concerns, or suggestions for improvement.

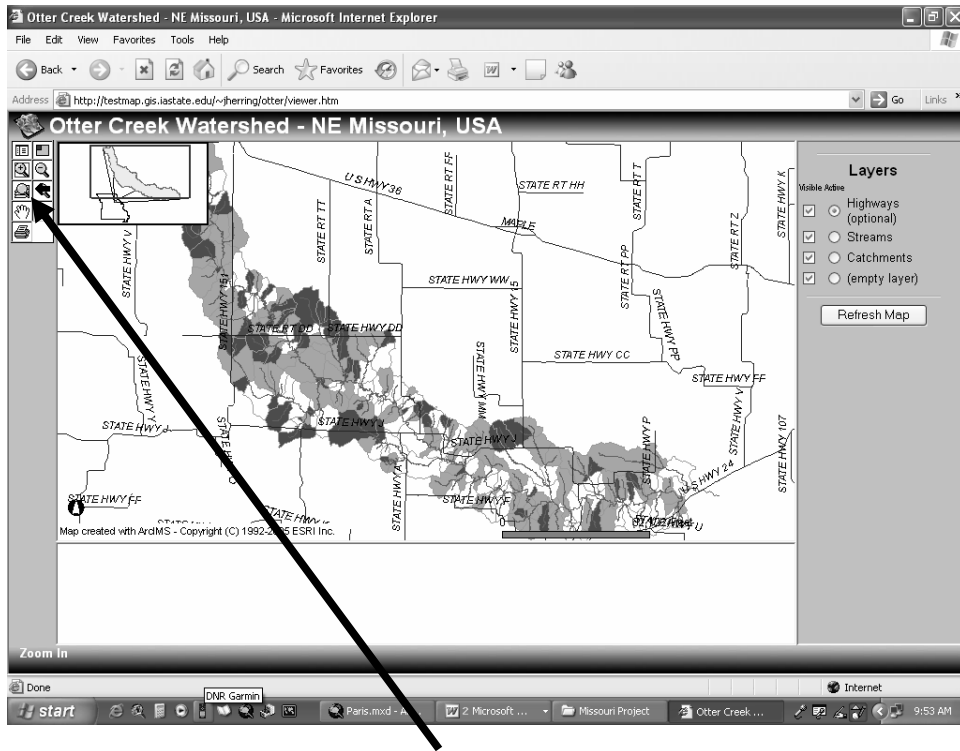
Summary: This tool was developed by Joe Herring, graduate student at Iowa State University working in conjunction with the University of Missouri Center for Agroforestry. Its purpose is to provide natural resource managers with an easy-to-use decision support tool for identifying and prioritizing potential sites for riparian buffer restoration. Currently, websites exist online for each of three sub-watersheds to the larger Mark Twain Lake watershed: Crooked Creek, Otter Creek, and Long Branch. The websites offer a preliminary version of a tool that may be developed in the future, and thus are not permanent.

Getting Started: Any computer with access to the internet can use the website, but it helps to have a high-speed connection. *Users who do not have experience in GIS are strongly urged to seek help from someone to help get you started!* After a short while at the controls, anyone will find the websites very easy to use. The websites are located at:

1. <http://testmap.gis.iastate.edu/~jherring/crooked/viewer.htm>
(Crooked Creek watershed)
2. <http://testmap.gis.iastate.edu/~jherring/otter/viewer.htm>
(Otter Creek watershed)
3. <http://testmap.gis.iastate.edu/~jherring/longbranch/viewer.htm>
(Long Branch watershed)

Some users may have to adjust their screen size, or minimize/maximize their window to get the websites to view properly.

Familiarize yourself with the tools: The set of tools you have to work with are located in the upper left corner of your screen, as the diagram below shows:



Tools are here

To see what a certain tool does, simply move your mouse cursor over the top and wait for the pop-up tip to appear. The following tools are available:

Toggle between Legend and Layer List

Allows you to alternate between seeing what layers are visible (which is the default) or what the layers mean (how they are symbolized). The Legend or Layers List appear on the opposite side of the screen from the tools, in the upper right corner.

Toggle Overview Map

Turns on or off the mini-map of the entire watershed, which is next to the tools

Zoom in

Allows you to drag a zoom box over an area to zoom in closer on.

Zoom out

The opposite of zoom in.

Zoom to Full Extent

When clicked, returns you to the full extent of the watershed (sort of like a restart button).

Back to Last Extent

When clicked, returns you to the previous zoom scale you were just at.

Pan

Used to grab hold and move around the watershed, remaining at the current zoom level.

Identify

Use to click on certain features to learn more about them. NOTE: You must choose which layer to make the "Active Layer" to use this tool, as it only works on one layer at a time.

Print

Creates a printable page including title, overview map, and legend.

Zoom in to see more detail: The websites contain a feature called “scale-dependant rendering,” which means that at some scales you won’t see all the layers that are available. This is to prevent too much detail being shown when you’re zoomed out far away, or too little when you’re in close. For instance, you can’t see the aerial photography when you first get to the website, because the scale is such that you wouldn’t see any detail even if you had aerial photos. But zooming in closer reveals the 2003 aerial photography.

You can turn layers “on” or “off” if you don’t want to see them: Be aware that in the upper right corner of the screen, you may uncheck certain layers if you do not wish for them to be in the view. Just uncheck the box under “Visible” and click “Refresh Map”.

Data Layers: To see what certain colors mean in the map, click the “Toggle Legend and Layers List” button in the toolbar. The Legend appears in the upper right corner of your screen. The following layers are available to view and identify, depending on the scale:

Major Highways

Includes state and U.S. highways. Remains visible under all scales, so it must be manually turned off if you do not wish to see highways in the view.

Streams

Perennial streams only, as digitized from aerial photography. Remains visible under all scales.

Catchments

Also known as sub-basins, sub-watersheds, source areas. By default, this layer is the first that you see when you get to the website. They are symbolized by the percent of total stream length in the catchment which are buffered to full recommended width (according to NRCS Standards and Specifications 391 and 393.) When zoomed in beyond 1:20,000, this layer is not visible. Between 1:35,000 and 1:20,000, the layer is transparent to allow the aerial photography to show through from underneath. By activating this layer and using the identify tool, you may determine the actual percent (in decimal form) of stream length buffered to recommended width.

SMU’s

Known as “Stream Management Units”, the SMU’s represent the fundamental unit of management. They are blocks of land within 180-ft of streams, and divided by land/tract boundaries. This layer is available only after you’ve zoomed in to 1:50,000 or closer. By activating this layer and using the identify tool, you may learn much about particular sites.

CIR

“Color Infra-Red” aerial photography taken 2003. Available when zoomed in to at least 1:35,000 scale.

NRCS Buffer Width

This layer consists of a line drawn around all streams to a distance of 100, 150, or 200 feet. It represents the total combined width recommendations taken from the Missouri NRCS Riparian Forest Buffer and Filter Strip Practice Standard and Specifications documents. Here, they simply serve as a guideline to follow, not a concrete requirement that has to be followed. They can only be seen when zoomed in to at least 1:18,000.

Using the “Identify” tool: This tool holds the majority of the power of this website, mostly for identifying SMU polygons. It allows the user to learn many things about a particular site of interest, including its:

- Size (acres)
- Amount of cropland (acres) within 180-ft of the stream
- Predicted management concerns
- Potential government programs available for conservation
- Possible conservation practices which the site needs

To use the “identify” tool for SMU polygons, you must first make the SMU layer the active theme. In the upper right corner of your screen, simply click the radio button next to the “SMU’s” under the “active” column. If you don’t have the radio buttons available, you probably need to click the “Toggle between legend and layers” button in the upper left portion of your screen.

FINAL DISCLAIMER: These websites only provide predictions, or estimates, of where buffers would work well for *water quality*. Riparian buffers are a valuable agroforestry tool that provide much more than just water quality benefits, including wildlife habitat, economic income, landscape and biological diversity, and aesthetic beauty. Specific sites that are highlighted in red and labeled “High Priority” were done so based solely on the topography/terrain attributes and the soils which exist on the site (and in it’s drainage basin), and nothing more. Other site characteristics will have a dramatic impact on whether or not a particular site would be well-suited for riparian corridor restoration. Such characteristics, and ones which were not taken into account by this project, include:

- Land management (in-field practices, tillage & rotation systems, grazing, fertilizer and herbicide applications, etc.)
- Groundwater, geology, and tile drainage
- Chemical, physical, and biological properties in soils
- Vegetative species and characteristics
- Landowner willingness/cooperation
- Feasibility/practicality
- Benefits vs. costs

Whom you may contact with questions, concerns, or suggestions:

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