

Riparian Areas: Why Should We Care and What Can We (or Can't We) Do?

by Bruce Reiman

"Development along rivers and streams that destroys protective riparian areas is possibly the single most urgent ecosystem threat facing Montana today." Governor Brian Schweitzer - Letter to DEQ, DNRC, FWP Directors, March 8, 2006.

A November EOE article focused on stream networks and their importance to us. In January Jay Kolbe reviewed recent work on small dams and their effects on fish and streams. I want to continue the discussion about streams focusing on "riparian areas" and some of the issues we face in trying to maintain them.

Healthy watersheds and streams may be particularly valuable to those of us in the west. They deliver pure water, support recreation and important fisheries, and even act as corridors for wildlife. They can also buffer us against environmental threats like wildfires and flooding.

A primary mechanism for these natural services is the link between streams and their watersheds through floodplains and riparian areas. A riparian area is the zone of vegetation that is directly influenced and maintained by the stream and groundwater associated with the channel and floodplain. Often these areas are visible as distinctly different or more abundant vegetation, sometimes appearing as a strip of green through meadows and prairies, dense willows or alders in many areas, and denser or more water tolerant trees in forests. Riparian areas may extend from 5' to more than half mile from the stream depending on land and climate.

The vegetation in riparian areas does a lot of the important work for streams--- and for us. Woody vegetation such as willows or other trees, native grasses and sedges have extensive root systems that stabilize banks and minimize bank erosion. Trees and shrubs provide shade that helps keep the water cool and provide cover and food for aquatic organisms and other wildlife. Because of this, riparian areas are often some of the most important habitats for birds and can act as movement corridors for other species. Some native riparian plants provide nutrients for streams and can store nutrients that might otherwise be lost from a watershed following large fires. Riparian areas act as important filters for sediment and pollutants that may come with surface runoff; as a result, riparian "buffer strips" have become one of the most important tools protecting streams and water quality during and after forest logging. Because riparian plants trap sediment and provide a complex structure to floodplains, riparian areas can store water during spring runoff, release it slowly, and extend flows during the summer when fish and people often need it most. Because riparian areas and vegetation tend to be wetter and greener, they can also act as fire breaks. A striking example of this can be seen along upper Placid Creek where some stream-side areas escaped the fire storm on the first and second days of the 2007 Jocko Lakes fire.

Human actions can compromise the benefits from riparian areas if we aren't careful. Development for and activities around homes, farms and ranches, golf courses, highways, and other facilities often encroach on stream riparian areas. This may be because of a need for space or because stream sides provide something we want-- forage for livestock, farm land, views, access to the stream itself, or access to other low lying areas. As a result natural vegetation is often damaged or removed, sometimes replaced with crops or lawn, which provide little of the benefit of native riparian plants. Because riparian areas and flood plains overlap, development here is vulnerable to flooding and bank erosion. Landowners may intentionally remove vegetation and woody debris attempting to provide more efficient transfer of high water, or they may

harden banks with riprap to minimize bank erosion and loss of property. The problem is, those actions often transfer the stream energy compounding problems for landowners downstream who may then resort to similar actions.

Awareness of, and interest in riparian areas is growing in the Clearwater and surrounding river basins. With more people, housing development, concerns about wildfire, climate and other environmental changes, biologists have noted declines in fish and wildlife habitats and populations and availability and quality of water. In efforts to understand those changes and retain the benefits we all get from healthy watersheds, new work has been focused on conditions around streams.

From that work it is apparent that more and more riparian areas are being altered by development. One reason may be that many landowners aren't aware of the role streamside vegetation plays in protection of streams and the natural benefits they provide. Also, they may not be aware that several laws exist to protect these areas as a common resource for all. The State Agencies have begun a focused effort to inform landowners about the effects of streamside alteration. These agencies as well as local organizations like the Big Blackfoot Chapter of Trout Unlimited are working with some landowners to repair damaged areas. The Missoula County Conservation District is responsible for enforcement of the "310 Law" which protects riparian areas, but they are more interested in working with landowners and others who can help protect stream-side areas than in going to court.

The 310 Law, otherwise known as the Natural Streambed and Land Preservation Act, was established by the Montana Legislature in 1975 to insure that projects along perennial streams will be done in ways that are not damaging to the stream or to adjoining landowners. In Missoula County, the 310 Law is administered by the Missoula Conservation District in collaboration with the Montana Department of Fish Wildlife and Parks. Stream-side property owners are limited on what they can do within 10' to 50' of the stream depending on the size of the stream. In Missoula County, unless specifically authorized through a 310 Permit, mowing and/or removal of vegetation within the immediate banks (10' to 50') of a perennial-flowing stream is prohibited. There are similar laws in most states.

We are fortunate in the Clearwater, Blackfoot, and Swan river valleys to still have many healthy streams and riparian areas. Hanging on to those and the benefits they bring is being challenged by growth and development and our own independent life styles. A collision between development, private and common property rights, and environmental laws intended to protect common resources could be inevitable. The Clearwater Resource Council is interested in supporting the discussion on how we deal with these issues before that happens. If you're interested let us know

CRC sponsors monthly meetings on local natural resource issues in Seeley Lake. Meetings are announced in the Pathfinder. You can also learn more on webpage <http://www.crcmt.org>

A full description of the 310 Law is available through Missoula Conservation District (Missoula CD) - www.missoulacd.org. Information on related laws controlling development of, in, and around streams, lakes and wetlands is available through the Montana Department of Natural Resources and Conservation http://dnrc.mt.gov/stream_permitting/guide.asp.

You can learn more about riparian areas and their management at

<http://www.mtwatercourse.org/WaterResources/Buffers.htm>