

The Riparian Zone

The riparian zone is the transitional area of land that connects the aquatic (wet) system to the drier uplands that are not reached by flood waters. Due to the regular occurrence of water and periodic flooding, riparian areas support a great variety of plant and animal species. As a result, they are among the most productive and valuable of all landscapes, especially in arid climates.

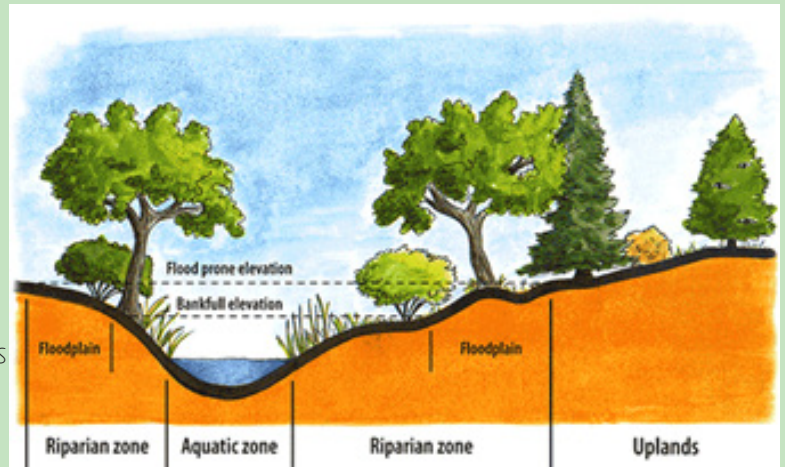
Healthy riparian and wetland areas are critical to healthy watersheds. Wetlands support vegetation adapted to soils saturated by surface or ground water. Riparian areas serve as habitats and travel corridors for vegetative communities. Examples of riparian areas include cottonwood and willow forests along streams and vegetation along lakeshores.

Wildlife and communities all benefit from landscapes with healthy riparian-wetlands. Water, itself, is a precious resource on public lands in the arid West. Riparian-wetland areas store life-sustaining supplies of water to ensure this resource is available during times of drought. They serve as habitats for fish and wildlife. Riparian-wetland areas provide local communities with adequate supplies of clean water.

Shade created by the riparian vegetation moderates water and air temperatures. This vegetation limits water contamination, slows water velocities and filters and collects large amounts of sediment and debris. Uncontrolled sediments can kill fish and destroy spawning areas.

Stream food chains depend on organic debris for nutrients. The vegetation along the stream, 99% of the energy comes from organisms. The 1% comes from photosynthesis, (the process by which green plants use sunlight to produce foods from carbon dioxide and water). The leaves, needles, cones, twigs, wood, and bark dropped into a stream are a storehouse of available organic material that is processed by aquatic organisms and returned to the system as nutrients and energy.

Maintaining a healthy riparian areas are vital to the health of streams, resulting in an abundance of food and support for the wildlife and any other native habitat. Many other threats to our streams are directly related to physical changes to these areas and loss of vegetation.



Riparian Zone Important Benefits

Erosion and Flood Protection

- Extensive root systems of riparian shrubs and trees stabilize streambank soils.
- Floodplains allow a stream system to store and absorb floodwaters, dissipating their destructive energy. High waters overflow out of the channel onto the floodplain.
- Vegetation slows down instream flows and helps divert away floodwater energy.

Water Quality Protection

- Plants slow runoff as it flows over the land, allowing pollutants to drop out before entering the stream.
- Root systems of riparian plants filter pollutants.

Food and Shelter

- Streams provide much needed wildlife corridors, especially in urban areas where habitat is highly fragmented.
- Multi-story layers of vegetation (trees, shrubs, ground layer) provide habitat and shelter for a diverse array of species. This structurally complex arrangement is often unique to stream corridors in arid lands.
- Tree shade helps to cool stream waters, which is critical for many aquatic species. Roots create stable overhanging banks, providing places for fish to hide and rest.