SITE Potential, Condition and Trend

IN order to establish realistic objectives for riparian areas, it is important to know the vegetation potential of the site under proper grazing management.

Unless the riparian area is in extremely degraded condition, or the stream is rapidly depositing soil from upstream sources, the potential of the site for various species of plants may be obvious. If it isn't, this insight may be available from similar sites in the local area.

Some riparian areas are so badly degraded there is little evidence to support predictions of vegetation potential. Some areas have been degraded for so long, or the deterioration has been so gradual, that no one can recall what vegetation used to be there. In these cases, relic areas — areas inaccessible to livestock because of terrain, or early man-made livestock exclosures may provide useful insight. Rapidly evolving ecological classification technology can be used to help predict or confirm vegetation potential.

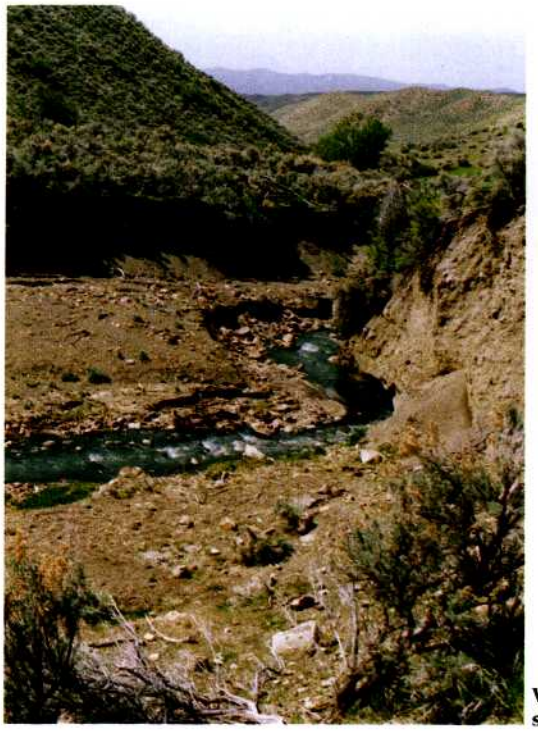
The present condition and trend of the desired riparian vegetation also may strongly influence the choice of grazing strategy. For example, different strategies might be used to restore severely deteriorated vegetation, to encourage an improving trend, or to maintain a desired condition once it is achieved.

The condition and trend of streambanks also will influence the design of grazing strategies to protect or restore riparian areas. Fragile or actively eroding streambanks likely will require a different grazing strategy than might be appropriate under more stable conditions.

Streams work off energy by constantly cutting and filling their channels in response to changes in flow, sediment load, and streambank condition. Riparian plant communities in good condition resist the cutting and stabilize the fill.

In areas with deep alluvial soils, accelerated downcutting of the stream channel can be triggered by increased rate of runoff resulting from loss of upland vegetation and topsoil. Downcutting lowers the streambed and the

Laterally unstable stream channel. Loss of upland vegetation and topsoil concentrates and increases the speed of runoff. Doubling the velocity of streamflow quadruples its erosive power and gives it 64 times more bedload and sediment carrying power.



Vertically unstable stream channel.