

SESSION C: RANGELAND AND DESERT RIPARIAN SYSTEMS

The importance of riparian systems in providing for a variety of uses (including wildlife and fisheries habitat, water quality, recreation, and livestock grazing) is well documented in the papers in this and several other conferences and symposia held since 1976. Nowhere are riparian systems more important than in deserts and rangelands. The reason is because deserts and most rangelands occur in areas of low or seasonal precipitation or both, resulting in relatively few riparian areas and greater habitat contrast between the riparian and adjacent upland communities.

Recognition of the importance of desert and rangeland riparian systems has resulted in augmented riparian programs on the part of both the Bureau of Land Management, U.S. Department of the Interior, and the Forest Service, U.S. Department of Agriculture. These programs were summarized and commented upon in a report commissioned by Congress (General Accounting Office, Public Rangelands: Some Riparian Areas Restored but Widespread Improvement will be Slow, Report GAO/RCED-88-105, 1988).

Controversy, too, has helped drive this new riparian initiative. Probably foremost among the controversial issues is livestock grazing and its effects on riparian areas. Overgrazing of riparian areas was commonplace in the West in the late 19th and early 20th centuries. Even in recent times, when upland rangelands have been improved, riparian zones have continued to suffer from overuse. Traditional grazing systems designed to improve upland rangelands do not usually work in riparian areas.

As the papers in this session show, this trend is changing. Management techniques have been designed and implemented to improve the condition of riparian areas. These techniques have ranged from total exclusion of livestock to the implementation of grazing systems designed to improve riparian vegetation. Execution of these actions to improve riparian areas depends not only on land management agencies but on private landowners and ranchers as well. Many ranchers are becoming increasingly aware of the value of riparian areas and are working to improve the management of these areas, as the paper by Flournoy and others demonstrates.

Off-road vehicle use and other forms of recreation are impacting desert riparian systems also, especially in California, where urban populations place heavy pressure on nearby areas. Desert riparian systems are afflicted too by the spread of several introduced species of the genus *Tamarix* at springs and along rivers. The paper by Van Cleve and others discusses management actions taken to ease both of these conflicts.

According to the recent Congressional report (cited above), neither the Bureau of Land Management nor the Forest Service has completed comprehensive inventories of the riparian resources on Federal lands. There is a similar lack of inventory information on the riparian resources on private lands. Clearly, more extensive inventories of riparian areas are necessary. The paper by Gradek and others details the inventory efforts of the Bureau of Land Management in California.

An adequate and widely accepted classification system for riparian areas is a necessary precursor to any inventory. Such a system should take into account the important physical and biological components of riparian systems. The azonal nature of riparian systems makes classification more difficult than that of zonal upland ecosystems, but successful approaches have been implemented, as the papers by Bennett and others and Swanson show.

Riparian systems tend to be resilient: the presence of water year-round allows riparian vegetation to respond rapidly to management, as the papers by Key and Gish attest. Once improved management has been implemented it is important to allow riparian systems to repair themselves, as the paper by Elmore demonstrates. Too often we have tried to impose our own will upon the systems through the use of structures such as checkdams and streambank revetments, instead of first giving riparian vegetation a chance to do the job.

Much work still must be done to improve the degraded riparian areas of the West. This conference hopefully will stimulate land managers, both public and private, to continue working toward improving the condition of these critical ecosystems.

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