

The Protection of Riparian Areas: New Approaches for New Times?

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"Water, water, water....There is no shortage of water in the desert but exactly the right amount, a perfect ratio of water to rock, of water to sand, insuring that wide, free, open, generous spacing among plants and animals, homes and towns and cities, which makes the arid West so different from any other part of the nation. There is no lack of water here, unless you try to establish a city where no city should be. (1)

"All I knew was that it was pure delight to be where the land lifted in peaks and plunged in canyons, and to sniff air thin, spray-cooled, full of pine and spruce smells, and to be so close-seeming to the improbable indigo sky. I gave my heart to the mountains the minute I stood beside this river with its spray in my face and watched it thunder into foam, smooth to green glass over sunken rocks, shatter to foam again. By such a river it is impossible to believe that one will ever be tired or old." (2)

"The modern ditch is lined along its entire length with concrete to prevent the seepage of water into the soil; consequently, nothing green can take root along its banks, no trees, no sedges and reeds, no grassy meadows, no seeds or blossoms dropping lazily into a side-eddy. Nor can one find here an egret stalking frogs and salamanders, or a red-winged blackbird swaying on a stem, or a muskrat burrowing into the mud. Along the Friant-Kern Canal, as along many others like it, tall chain-link fences run on either side, sealing the ditch off from stray dogs, children, fisherman (there are no fish anyway), solitary thinkers, lovers, swimmers, loping hungry coyotes, migrating turtles, indeed from all of nature and of human life except the official managerial staff of the federal Bureau of Reclamation.(3)

Writers are better than law professors (at least this one) at conveying what is at stake in the protection of western riparian areas. The total magnitude of riparian areas lost in the West since European settlement began is variously estimated, but is widely acknowledged to have been great. Riparian protection is now beginning to be recognized as a critical aspect of environmental protection in the West, along with preservation of old growth forests, species protection (mountain lions, bears, wolves, representing a few around which campaigns have been mounted), and a myriad of other causes. As bitter as other resource struggles are, little compares to the emotions generated by water in the West, and riparian areas are dangerously close to water.

In this brief paper, an appraisal of the opportunities and barriers to riparian protection and restoration is presented. The focus is on public policy and current opportunities for riparian protection; the discussion is deliberately broad.

The dilemma of interconnectedness is that what we recognize to be true, that everything is linked to everything else, makes the formulation of policies that do justice to

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this truth impossible. The test of practicality, "what is most likely to result in on the ground improvements," gives some guidance as to where policies should be directed, but will also give varying answers with varying circumstances. Riparian areas do not fit neatly into existing regulatory programs, because they can be viewed through so many different lenses. The formulation of policies for better protection will reflect this diversity.

Future Stresses

The identification of strategies to protect riparian areas must reflect the changes that are occurring in the West. Fundamental among these is the burgeoning population of the region. The Census Bureau has recently revised its national projections from an essentially flat rate of growth to a 50% increase in the next six decades. The resulting population is estimated to be 383 million people in the year 2050. (4) For the western United States, projections are even more dramatic. Of the ten states with the highest rates of population change in the next two decades, all are in the West (including Alaska and Hawaii). (5) The rates of population change are projected to range from 10.6% to 21.1%.

Population growth will increase the pressure on riparian areas in a number of ways. Intensified demands will be put on them for recreational use, commercial development, housing development, and other uses to which humans put these popular areas. Population pressure will also magnify the demand for water, which is discussed below.

Global climate change and its effect on water and, incidentally, riparian systems, has been the subject of much recent discussion. While localized effects are subject to debate, there does seem to be agreement that global warming will increase the demand for water supplies and that wildlife will be a likely loser. (6)

The increasing number of users for water, then, is a critical aspect of the changing stresses on western riparian systems. Here, large scale studies of what the future holds are difficult to find, presumably because the subject is so complex and varied by region. A study by the U.S. Water Resources Council which did look at future water demand at a river basin level is noteworthy. To understand it, however, a word about the role played by groundwater in the West is appropriate.

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Western states are far more reliant on

groundwater than are eastern states, using twice as much groundwater as do eastern states. (7) This use of groundwater has two important consequences for riparian areas. The first is that groundwater pumping is not sustainable for much of the West. Groundwater mining, by necessity, means that users will eventually turn to other sources to supply their water needs. The second is that the pumping of groundwater can itself affect riparian areas by reducing water levels.

The Water Resources Council estimated instream flow needs and then subtracted, among other items, groundwater overdraft, to determine if needs could be met without resorting to groundwater overdraft. The study then attempted future projections, and indicated deficits of flows in the Rio Grande Basin, the Lower Colorado, and the Great Basin. (8) This gives a rough idea of the magnitude of water demands that are masked by groundwater mining. (The increased use of groundwater in California agricultural areas during periods of drought is an example of this). Thus, new populations will come to a West which has already drawn heavily on its groundwater reserves, and where wildlife needs will be difficult to protect.

The changing legal and institutional setting.

Riparian issues are a key environmental resource in the West. In the first waves of environmental regulation the focus has been mostly on the human health aspects of environmental problems. Ecological issues have received less attention. A report of EPA's Science Advisory Board, *Reducing Risk: Setting Priorities and Strategies for Environmental Protection, 1990*, identified this emphasis in EPA's activities. It is primarily a reflection of Congressionally mandated priorities in various pieces of federal legislation. Further, Western issues have often been ignored in federal legislation (albeit occasionally at the request of western legislators and interest groups). The Clean Water Act, for example, aggressively addresses industrial point source dischargers, of which there are relatively few in the west, and fails to regulate nonpoint source regulation, the primary cause of western water quality impairment.

It would be improvident to make a prediction that Congress will now focus more on western environmental issues and federal lands management. Nonetheless, much remains to be addressed within the sphere of the western environment and the public lands issues, at least, have reached a level of controversy where they are difficult to avoid.

A second aspect of the transformation in the political setting will occur at the administrative agency level. Federal land agencies are critical to riparian management because of federal ownership of western lands and administration of a number of programs which bear on riparian areas. The context in which these powers are exerted has changed with the election of a new President. Riparian values have come of age, so to speak, in an era of

environmental program devolution from the national to state governments. The "New Federalism" and the general disparagement of environmental interests at the Presidential and Cabinet level meant that federal resource managers took on new environmental initiatives at some peril. While President Clinton's administration is considerably more environmentally assertive, the tenets of the new federalism have taken hold within the states. This dynamic promises conflict and perhaps the development of new paradigms in how federal initiatives are shaped. The assertions of this paragraph are admittedly deserving of further discussion. In brief, the thesis alluded to is that the widespread domination of environmental policy by the national government represented by Congressional decision-making in the 1970s and early 1980s would now face effective opposition from an alliance of commercial and state interests. This is illustrated by the unsuccessful attempts to pass national groundwater legislation. (9)

To point to possible conflicts with states is not to characterize the states as necessarily hostile to environmental values and riparian protection. Certain states and substate governments have been noted for their growing leadership in environmental protection and administrative capabilities. States are, of course, not monolithic with regard to environmental protection, so that there is a great deal of variation in attitudes towards environmental controls and enforcement.

Resource management issues have proven to be very contentious within the western states, and conflicts over issues such as logging, endangered species, wilderness designations, and

reserved water rights, have mobilized constituencies opposed to restrictions on resource development. The "Wise Use" movement, in particular, represents a well-organized challenge to the environmental

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Donald Worster

movement. The new population growth occurring within the West is not based on resource extraction and development, however, so that the environmental attitudes of the region in the future are difficult to predict. The unanswered question is whether we will see conflict between environmentally oriented federal managers and resource development oriented states, or whether there is a new commonality of values which will lessen these conflicts.

Tribal governments also have a role in the protection and restoration of riparian areas. The trend in federal environmental statutory schemes is to permit tribal administration of federal schemes, in a parallel manner to states. This will not be sufficient for riparian management, because of the absence of comprehensive federal programs for riparian protection. Tribes can and do exercise initiative in nonfederally mandated areas, but the emphasis likely to be placed on riparian protection is difficult to determine.

Policy Directions

There is little disagreement, at least among those represented at a Riparian Conference, about the need for further measures to protect and restore riparian ecosystems. Nor has there been for some time (10) and there are reasons to believe that new initiatives could be successful. The vision, or goal for protection and restoration needs to be clearly identified. For purposes of this discussion, the assumption is that no further losses should be allowed to occur. The strategies which might be utilized to achieve that goal are myriad. The questions raised here are meant to assist in development of these strategies.

Is there a need for a new national initiative to protect, preserve and restore riparian areas? What would the costs of such an initiative be? A persistent theme in resource management has been the increased expense of more intensive management, at least initially. The U.S. General Accounting Office (11) discusses the effect of lack of staff and resources on restoration improvements. Fencing, plantings, building check dams, and other techniques cost more than benign

neglect. The personnel devoted to community meetings and negotiations can also be a costly burden on an agency. Acquisition of critical riparian areas can be expensive. There are obviously benefits to these actions, including decreased siltation in downstream dams, cleaner water (and possibly lower pollution control costs for downstream dischargers), more recreational opportunities and more wildlife. These benefits can be quantified. Nationally, infrastructure repair is justified in terms of immediate employment benefits and long-term investment in the nation's health and economy. Riparian restoration could be justified in the same terms.

Do we need statutory language for federal agencies which specifically addresses riparian management? Would it be preferable to address biodiversity protection generally, with riparian areas an included category? There are two questions here, and they are complicated. The first asks how well federal statutes now protect riparian areas. There is no comprehensive law protecting riparian areas as such, although there are various federal laws which can be used, in certain circumstances, for protection and to authorize restoration. A comprehensive cataloging of these statutes and their operation is beyond the scope of this talk. Further, state statutory provisions should also be consulted. Certain provisions cut across all forms of land ownership (such as the Section 404 permitting program of the Clean Water Act or the Endangered Species Act); others are addressed to individual forms of land ownership, such as the Federal Land Policy and Management Act. Those involved in riparian protection have already discovered the multiplicity of statutes which affect this area.

The second question is what sort of federal statutory protection might be desirable. One option is a specific mandate to federal agencies to consider and protect biodiversity in their management activities, which directs that riparian protection be elevated above other multiple use purposes. One author has explored how existing statutory authorities could better be used to protect biodiversity. (12) A different

approach might be modeled on the Coastal Zone Management Act, in which a federal interest in the coastal zone is recognized, and states are encouraged to enact protective measures to protect it. Another approach would be to use the pending amendment of the Clean Water Act to require protection of riparian areas. Under the framework of that Act, states could be required to adopt standards which provided protection for riparian areas, subject to federal approval. Even under existing law, federal agencies may be required to undertake riparian management to prevent stream standard violations. (13)

There are some evident problems with any of these approaches, but I think a common one in everyone's thoughts would be the "takings" issue. Especially given the charged nature of Western political dynamics, it may make sense to acknowledge that private users will be powerful opponents of greater regulation unless economic injuries are somehow ameliorated, regardless of where the legal merits of a claim might lie.

Partnerships and new management models hold enormous hope for riparian protection. In these, states, local governments, citizens organizations and industries all contribute. Another set of questions is raised by asking what is needed to assist in creating and sustaining these ventures?

Improved management of water is critical to all of these efforts. Other speakers address the use of the public trust doctrine, instream flow rights, and better management by federal agencies as aspects of providing water for riparian needs. A rich literature has been developed over how Western water laws can accommodate new uses for water. (14) In contrast, groundwater is just beginning to receive recognition as a potentially important factor in riparian protection.

States, local governments, and tribal entities need assistance in improving their management of riparian areas. While ecological issues are now being accorded far more importance than in recent years, most of EPA's budget will go to statutorily

established programs. For ecological priorities to receive funding commensurate with their importance, it is likely that additional program funding will need to be sought from Congress, to be passed on to states and others.

This conference provides ample testament that protection and restoration of riparian areas is possible through the hard work of many individuals and institutions. This is a time to be expansive in taking these efforts to a larger scale.

References

1. Edward Abbey, *Desert Solitaire: A Season in the Wilderness*, 144-5, New York: Ballantine Books, 1968.
2. Wallace Stegner, *The Sound of Mountain Water, Overture*, 42, Lincoln: UP Nebraska, 1985; orig. pub. New York: Dutton, 1980.
3. Donald Worster, *Rivers of Empire: Water, Aridity, and the Growth of the American West*, 5, New York: Pantheon Books, 1985.
4. N.Y. Times, Dec. 4, 1992, at A1.
5. U.S. Bureau of the Census, *Current Population Reports, Series P-25, No. 1053, Projections of the Population of States by Age, Sex, and Race: 1989 to 2010* at 14 (1990).
6. Tarlock, *Western Water Law, Global Warming, and Growth Limitations*, 24 *Loy. L. A. L. Rev.* 979 (1991).
7. Data are drawn from W. Solley and R. Pierce, *Preliminary Water-Use Estimates in the United States During 1990*, U.S.G.S. Open-File Report 92-63 (1992).
8. U.S. Water Resources Council, *The Nation's Water Resources 1975-2000; Water Quantity, Quality, and Related Land Considerations*, Vol. 2, pg. 12 (1978).
9. See, Fort, *Federalism and the Prevention of Groundwater Contamination*, 27 *Water Resources Research* 2811 (1991).

10. See, Kusler, *A Call for Action: Protection of Riparian Habitat in the Arid and Semi-Arid West*, in the Proceedings of the First North American Riparian Conference, USDA Forest Service General Technical Report RM-120, 1985, and McCormick, *A Summary of the National Riparian Symposium: A Proposal for a National Riparian Program*, in the Proceedings of the Symposium on Strategies for Protection and Management of Floodplain Wetlands and Other Riparian Ecosystems, 1978.

11. U.S. General Accounting Office, *Some Riparian Areas Restored but Widespread Improvement Will Be Slow*, GAO/RCED-88-105, June, 1988

12. Fischman, *Biodiversity and Ecological Management: Biological Diversity and Environmental Protection: Authorities to Reduce Risk*, 22 *Envtl. L.* 435 (1992).

13. Braun, *Emerging Limits on Federal Land Management Discretion: Livestock, Riparian Ecosystems, and Clean Water Law*, 17 *Envtl. L.* 43 (1986).

14. See, for example, Moore and Willey, *Water in the American West: Institutional Evolution and Environmental Restoration in the 21st Century*, 62 *U.Col. L. Rev.* 775 (1991); Wilkinson, *Aldo Leopold and Western Water Law: Thinking Perpendicular to the Prior Appropriation Doctrine*, 24 *Land & Water L. Rev.* 1 (1989).

