

# River Voices

The quarterly publication of River Network

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## Challenges in Watershed Activism

by Pete Lavigne

*Ecologists perpetually talk about the interdependence of nature and lip service is given to this notion on Earth Day, but, in practice, environmental problems are approached one fragment at a time, not as a complex, multivariate, interdependent Landscape. The coexistence of technology, and biodiversity depends on switching from a fragmented to a landscape view.* John Cairns, Jr.<sup>1</sup>

Watershed is the environmental buzz word of the nineties. Debates on what watershed approaches mean politically and geographically, echo through the halls of Congress, offices of national conservation organizations, and on the pages of the nation's leading journals. A fine debate and worthy issues for the 1880s and the closing of the Western Frontier.<sup>2</sup>

Improved upon, refocused, energized, and revised, the time for watersheds-comprehensive, integrated environmental and political approaches to our riverine ecosystems, has arrived again 100 plus years later. The watershed approach to our river systems and, indeed, our entire natural environment, does lead the environmental debates of the 1990s as well.

### Ecological Literacy

How many of you know your ecological address? Do you know what watershed you live in? Simply put, a watershed is the land from which water drains into a particular stream, pond, or other water body. All land is part of one watershed or another. It is extremely important, for everyone, young, old, or in between, to know their ecological address. It is fundamental to our work as citizen activists, environmental

engineers, resource scientists, and regulatory administrators. Knowledge of your watershed, your ecological address, shows an understanding of our place in the ecosystem. Knowledge of our place in the ecosystem clearly indicates an understanding of the interconnectedness of the human and natural environment.

We've heard a lot of talk about "cultural literacy" over the last decade. We rarely hear, at least in broad public debate, about ideas and paradigms essential to cultural and physical survival in the coming century. Ecological literacy, the knowledge of our ecological addresses and relationships, raises important issues about our ability to thrive in comfort and splendor for the next millennium.<sup>3</sup>

Consider the current public debate over supposed "takings" of private property resulting from common, limited, (and generally timid) environmental protection measures. A basic level of ecological literacy throughout society would render the debate moot. Ecological literacy knows the inanity, the preposterousness, of the thought that individual property owners, (you, me and our neighbors) should have to be paid to protect resources (land, air, and water) that in common are required to sustain every human life and all other species on the planet.

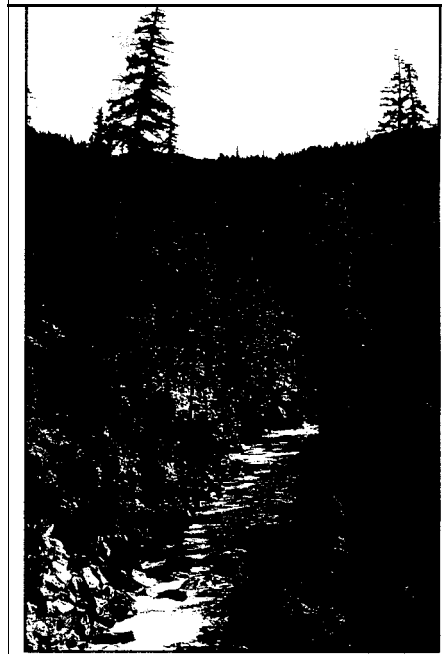


photo of White Salmon River, WA by Tim Palmer

***Protecting river corridors is an essential component of river conservation, but to truly protect river ecosystems, a watershed approach is necessary.***

### Watershed Approaches

A major challenge for the river watershed conservation movement includes gaining a greater public understanding of the role that natural rivers and streams play in enhancing the daily life of each and every citizen. In particular, we need to communicate river watershed protection in ways with which people can relate.

People relate to what they can taste, touch and feel. Waste products and recycling are popular and easy to understand because we have to deal with

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#### **River Network Action Alert (the colored pages)**

Includes an update on three pending pieces  
of new legislation affecting rivers and the Clean Water Act

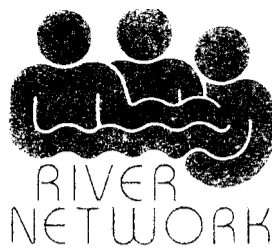
River Network would like again to thank Kim Klein for contributions to the last edition of **River Voices** that covered building a strong board of directors. Ms. Klein produces the highly acclaimed *Grassroots Fundraising Journal*, an excellent reference on fundraising and other nonprofit issues. For more information contact *GFJ* directly: P.O. Box 11607, Berkeley, CA 94701.

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*River Voices* is a forum for information exchange among grassroots, regional and state river groups across the country. River Network welcomes your comments and suggestions.

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*Editors:* Rita Haberman, Kathleen Krushas  
*Editorial Assistance:* Jean Hamilla  
*Design and Layout:* To the Point Publications, Portland, OR



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River Network  
P.O. Box 8787  
Portland, Oregon 97207  
(503) 241-3506 or  
(800) 423-6747  
Fax: (503) 241-9256  
Econet: rivernet@igc.apc.org

River Network is a national nonprofit organization dedicated to helping people save rivers.

We support river conservationists in America at the grassroots, state and regional levels; help them build effective organizations; and through the **River Network Partnership** link them together in a national movement to protect and restore America's rivers and watersheds.

River Network runs the following four programs:

**River Clearinghouse** provides river activists with information and referrals on technical river resource and nonprofit organizational issues;

**River Leadership Program** develops new leadership and strengthens existing state and regional river advocacy organizations, and provides a link for local and state groups on national legislation;

**River Wealth Program** builds the capacity of river organizations to support themselves financially;

**Riverlands Conservancy** brings critical riverlands into public ownership, thereby empowering the public to oversee management and protection.

#### **River Network Staff**

*Executive Director:* Phillip Wallin  
*River Clearinghouse Director:* Rita Haberman  
*River Leadership Program Director:* Pete Lavigne  
*River Wealth Program Director:* Pat Munoz  
*Riverlands Conservancy Director:* Sue Doroff  
*Administrator:* Lindy Walsh  
*Administrative Assistant:* Jean Hamilla  
*Intern:* Blake Andrews

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# From the Director

"To save the river, save the mountain." This ancient Chinese saying could be the motto for this issue of *River Voices*.

In the 1980s, I worked with the Rio Chama Preservation Trust to stop the Corps of Engineers from drowning a few miles of a beautiful stream in northern New Mexico. We got federal Wild and Scenic designation for 25 miles of the stream and called it a victory.

In retrospect, we didn't "save" the Chama in any meaningful way. The Rio Chama was and remains a sick stream, flowing brown with the silt of tributaries, its natural flows manipulated by dams, its landscape dominated by cattle. There was a big job to be done there in slowing down the loss of soil, restoring the riparian vegetation, restoring the natural cycle of flows, even bringing back the trout.

In the 1980s, we were not thinking about the watershed. We were thinking "Wild and Scenic" because that was the conventional standard for river protection. Today, in the 1990s, we would approach the problems of the Rio Chama very differently. We would map the watershed. We would research its natural history. We would develop a vision of a healthy Rio Chama watershed. We would set a meaningful benchmark for success, like bringing back the brown trout. And then we would work with ranchers, landowners, water users, recreationists, the Corps, the SCS, the Forest Service, the BLM, environmentalists, state government and the tribes to accomplish that goal.

That is a job that would call forth all our skills as river conservationists. It would require science. It would require cooperation and diplomacy. It would involve us in politics. Most of all, it would require *stayingpower*. The Rio Chama coalition would have to stay together for a 20-year campaign. The result, if we succeeded, would be more than "free-flowing water." It would be a healthy, productive river ecosystem.

As with any human initiative, whether watershed management is meaningful depends entirely on the intention behind it. It can be, and often is, little more than a round-table for interest groups, a forum to validate existing land-use practices. In a recent issue of *Headwaters*, Friends of the River reports that private landowners on Deer Creek, in the Sierra Nevada foothills of California, organized a "Deer Creek Watershed Conservancy" in order to preclude Wild and Scenic designation for the stream. According to *Headwaters*, "Conservationists are wary about this proposal since the 'conservancy' appears dominated by many of the same interests responsible for dewatering the creeks, overgrazing riparian lands and more recently, illegally constructing a road along Deer Creek in the existing Ishi Wilderness."

To be effective, watershed management has to be *science-based*, *value-driven*, and *problem-oriented*. It has to strive to understand the systems functioning within the watershed, the systems that provide the "community services" listed by Peter Warshall. It has to be dedicated to protecting and restoring those systems. And it has to be willing to question human activities that impair these systems. This questioning is hard to do within government. It takes a citizen group, with an ecological conscience, to champion the integrity of a watershed. The government programs described by Chuck Hoffman are part of the solution, but the momentum and the conscience need to come from private citizens.

We're proud to announce that nearly 100 river protection groups have signed on as Partners of River Network. As we work with these organizations to conserve "their" streams, I predict they will all evolve into watershed councils, in fact if not in name. The river ecosystem begins at the headwaters of the tributaries, and that's how far our vision needs to extend. "To save the river, save the mountain." Good advice for all of us.

Sincerely,



Phillip Wallin  
Executive Director



## Announcement: WATERSHED CONFERENCE



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Andrea Lindsay, EPA,  
(800) 424-4EPA.

**"TO SAVE THE RIVER, SAVE THE MOUNTAIN."**

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## Challenges of Watershed Activism *continued from front page*

them every day as part of living. The importance of river molluscs (clams and snails), macroinvertebrates (bugs), and their relationship to a healthy and natural environment is a more difficult concept for the general public to grasp. The knowledge necessary to know that effectively protecting a river means effectively addressing population growth, urban sprawl, air quality, solid waste disposal and a myriad of other issues throughout the watershed has to become a part of our culture, a part of our ecological literacy.

### Today's Challenge

Mere improvement in sewage treatment and reduction in waste disposal inputs alone will not save our river systems. Across this country the creeping suburbia exemplified by the tremendous coastal and river bank development boom of the 1980s threatens to undo the progress represented by water quality improvements since the passage of the sewage treatment mandates in the federal Clean Water Act. The explosion in destructive shoreline development, ironically made attractive by the improvements in water quality, threatens to permanently cripple the natural habitat and other resources that make our rivers so important to a sustainable natural environment.

### New Approaches

Citizen-based non-governmental river protection organizations in New England and in other scattered areas throughout the country have led a quiet revolution in environmental management for the last four decades. A significant minority of these groups advocated and began to implement educational programs addressing the fundamental interconnections between water quality, water supply, wetlands, air quality, and wildlife habitat. Local and regional river watershed associations, including the Cahaba River Society (AL), the Housatonic Valley Association

(CT), the Merrimack River Watershed Council (MA/NH), and many others have been ahead of the curve in the national environmental movement with their efforts to restore and protect the environment on an ecosystem basis, using river watersheds as the basic unit.

What does this mean on a practical basis? It means redirecting agency work, in addition to redirecting the work of private nonprofit river corridor protection and advocacy groups—to step back and take a look at the watershed, take a look at the global issues in the watershed and then figure out how we are going to apply our daily battles to those issues in a pro-active way.

Watershed approaches mean educating adult decision makers to regional issues and figuring out useful and innovative ways to adapt governmental boundaries to drainage basins and multiple jurisdictions.

An effective watershed approach involves a tough step-by-step process allocating precious resources and limited staff. It means stepping back a little, trying to figure out the critical issues, the global issues for the watershed. It also means making tough choices to get away from spending a lot of time in day-to-day mitigation efforts, and in the state permitting statutes, and spending more time and effort on political change enabling comprehensive approaches solving broader issues.

Most importantly, an effective watershed approach means focusing public attention to solutions for the single most critical environmental issue throughout the United States and the world, the rising population growth rate in the U. S. caused by the baby boom of the 1990s.<sup>4,5</sup>

One of the keys to effective watershed approaches involves creating political support for redirecting agency efforts. We are seeing the beginning of this kind of change within the Clinton Administration, and conversely, the loss of political support for these kinds of

changes in Congress and the Western states.

### 1990s & Watershed Conservation

The 1990s could be the decade of river conservation. A coordinated river and watershed conservation movement could strengthen the Clean Water Act, institute comprehensive recovery plans for endangered fish species, negotiate far-reaching mitigation for dams that are being relicensed, and forge and pass comprehensive new tools for river protection including the Watershed Protection and Restoration Acts, and the Urban River Restoration bills (See Action Alert).

To take advantage of these opportunities it will be necessary to mobilize a grassroots movement that can counteract the influence of the “backlash” that is becoming more and more organized. The people who are showing up at public hearings in droves to attack river conservation proposals seem sincerely to believe river conservation is just a front for the federal government to steal their land. That at least is what the organizers, supported by extractive private industries, have told them.

The framework for a grassroots movement exists in the 2,500+ river guardian groups across the country. It doesn't seem, however, that the traditional national environmental organizations will focus on this grassroots constituency, perhaps with the exception of volunteer monitoring programs in the Izaak Walton League, GREEN, or RiverWatch Network. Quite understandably, the national organizations want to focus their energies on the more direct roles of lobbying, litigation, intervention with agencies and gaining media attention for river issues.

### Building A Watershed Movement

The challenge then, is to work at the regional, state and grassroots levels to foster a cohesive movement of river

and watershed conservation. This means recruiting and empowering leaders. It means building organizations capable of carrying out campaigns. It means linking up all these leaders and organizations so that they can work together for the common goal, to stem the tide of river deterioration and forge new tools for watershed conservation. It also means building the personal relationships where we live, with our neighbors and businesses, river conservation colleagues, and key decision makers at all levels of society.

### Environmental Justice

In two aspects this is easy. We are a nation dependent on rivers for our drinking water. More than 85 percent of all Americans take some part of their everyday water from rivers. Watershed approaches also provide unique opportunities for improved environmental justice in America. Rivers are so intricately woven into the fabric of urban and rural society. They directly touch the wealthy and poor alike. The poor in America are most at risk when a river becomes degraded. They rely on rivers for drinking water to a larger extent and are most exposed to pollution and contamination. Watershed planning, with an emphasis on connecting urban grassroots organizations and poorer rural communities with basic decision making about river health, 'daylighting' streams, riparian habitat, and water resource allocation, can become a major tool for improving human health and increasing equity in America's environmental policy.

One small start has been made with the effort of River Network, the Pacific Rivers Council, American Rivers, the American Whitewater Affiliation, the Coalition to Restore Urban Waterways, and a number of other state and regional organizations. These organizations include the Cahaba River Society, the Merrimack River Watershed Council, New York Rivers U&ted and others who



"AN EFFECTIVE WATERSHED APPROACH INVOLVES A TOUGH STEP-BY-STEP PROCESS ALLOCATING PRECIOUS RESOURCES AND LIMITED STAFF. IT MEANS STEPPING BACK A LITTLE, TRYING TO FIGURE OUT THE CRITICAL ISSUES, THE GLOBAL ISSUES FOR THE WATERSHED."<sup>19</sup>

have informally banded together to support the Watershed Protection and Restoration Acts and the various Urban River Restoration bills now before Congress (See Action Alert).

Long-term success for river and watershed protection and restoration will hinge on the ability of this tentative alliance to work more closely together, to mobilize existing river guardian organizations, and to reach out to new constituencies in the inner cities, business, the federal government, environmental organizations and the states in a new National Watershed Campaign over the next six years.

Campaign goals could include:

- a coordinated Strategic National Watershed Restoration Initiative;
- major changes to the Clean Water Act;
- reorganization of the EPA and

other federal agencies;

- uniform and consistent standards for all federal land agencies;
- ecosystem and watershed level planning by all federal agencies;
- a comprehensive ecosystem-based watershed restoration program;
- a moratorium on new dam construction;
- periodic "State of the Nation's Rivers" reports; and
- stable, long-term funding and sufficient financial and tax incentives for riverine restoration.'

Some of these efforts are underway. Federal agencies including the EPA, Forest Service, Fish and Wildlife Service, and Bureau of Land Management, have all adopted new programs for ecosystem and watershed restoration and management. The immediate challenge for River Network and the watershed conservation movement is to coordinate, connect and expand the grassroots constituency as fast as river science and public policy have developed.

### Endnotes

<sup>1</sup> Cairns, John Jr. "Developing A Strategy for Protecting and Repairing Self-Maintaining Ecosystems," *Journal of Clean Technology and Environmental Science*, 199 1.

<sup>2</sup> Udall, Stewart R. *The Silent Crisis in the Next Generation*, 1988 (especially chapters 7, 9-10).

<sup>3</sup> Orr, David. *Ecological Literacy*, Sunny Press, 1992.

<sup>4</sup> Ahlburg, Dennis A. and Vaupel, James W. "500 Million Americans by 2050?" *Carrying Capacity Network FOCUS*, Vol. 3, No. 1, 1993.

<sup>5</sup> Rauber, Paul. "Cribonometry" *Sierra*, pp 36-41, May/June 1993.

<sup>6</sup> Pacific Rivers Council, *Entering the Watershed: An Approach to Save America? River Ecosystem*, 1993, P.O. Box 309, Eugene, OR 97440. ☛

*Pete Lavigne became director of River Networks River Leadership program in 1992. He is a former executive director of the Merrimack River Watershed Council and the Westport River Watershed Alliance.*

# Streaming Wisdom

## Watershed Consciousness in the Twenty-first Century

by Peter Warshall

In our towns and cities, two of the essential sources of life-water to drink and soil to grow food-remain hidden from our eyes. The hills and valleys are coated with asphalt, ancient streams are buried beneath housing, and soil is filler between gas, water, and electric piping. Watershed consciousness is, in part, an invitation to peel off (not discard) the layers of industrial and technological activity that hides us from the water and soils of our communities. It is an invitation to reveal where you live and how your body's plumbing and, in many ways, community heart, are connected to Nature's pathways.

### What is a Watershed?

A watershed is a gatherer—a living place that draws the sun and rain together. Its surface of soils, rocks, and plant life forms a “commons” for this intermingling of sun, water and nutrient. Physically, a watershed takes many shapes. It is drawn emblematically in the shape of a teardrop or a cupped leaf or a garden trowel to

depict the oblong dish-shape of the valley with its ascending hillslopes, the slopes that gather runoff toward a central stream and connect to another stream or the coast at the point of a leaf.

But, most watersheds do not faithfully copy emblematic drawings. Uplifting, faulting, downwarping, or layering of each watershed give them a beautiful individuality. The bedrock texture—its granite or shale, sand or limestone—helps create, mold and hold (in a sense, cherish) the watershed's fragile skin or soil. The texture of plants, soils, and rocks accepts rain and snow into its body as soil moisture and groundwater or lets it go: its unused water heading downstream or sky-up; its unabsorbed energy dissipating as heat or reflecting back through the atmosphere. This daily and seasonal passage of solar radiance, water's flow, and the earth's metabolic breaths is as unique in each watershed, as in each human, on the planet.

For humans, the watershed (and its big cousin, the river basin) is a

hydraulic commons—an aquatic contract that has no escape clause. From forested headwaters through agricultural midstream valleys to the commercial and industrial centers at the river's mouth, good and bad news travels by water.

Did my toilet flushing give downstream swimmers a gastrointestinal disease? Did the headwater's clearcut kill the salmon industry at the river's mouth? Did my city's water needs dam and drain off a river and close down an upriver farm that fed me fresh vegetables? Did the toxic waste dump leak into the groundwater and poison people in the next county!

Watershed consciousness is, in part, a promotional campaign to advertise mutual concerns and needs that bind upstream and downstream, instream and offstream, aboveground and belowground waterflow to citizens and nonhuman creatures.

The watershed journey is right out your window—among the hills and valleys that surround you. It is the first excursion of thought into the place you live. It is not inner geography—the continuing attempt to feel

better by mapping the mysterious meanderings of our hearts and mind—nor is it whole Earth geography—the struggle to gain perspective of our place in planetary history.

Watershed consciousness is a form of home awareness, respect, maintenance and repair. It starts by knowing where your water comes from (besides the faucet or vending machine) and where it goes when you flush; what happens to the rain that runs off your roof; what soils your home and community rest upon; what soils produce your food; and who shares your water supply, including which fish. The Watershed Way is a middle way, singing a local song, somewhere close by, between Mind and Planet.

### Watershed Economy

Watersheds provide free or relatively cheap community services that are often undervalued or not valued in river basin protection. Watersheds have “ecostructures” that gather, store, channel, schedule, disperse, transform, produce (and reproduce) goods, and provide information networks and dozens of crucial

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services for human communities. Water, heat energy and life itself—their abundance, their rhythm, and their quality—move in harmonies and disharmonies with watershed ecology and economics.

Certain aspects of watersheds can be valued by considering replacement costs (cost of replacing a forest killed by acid rain); shadow pricing (cost of restoring commercial fisheries damaged by dams or diversions); prevention costs (cost of purchasing flood-plain vs. replacing destroyed buildings and roads); loss of earnings (loss to eco-tourist industry by damming or rescheduling instream flows); environmental surrogates (cost of a wastewater treatment plant as a surrogate for water conservation, reduce sewage volumes, and a treatment by wetland) as well as others. No one has a good method for pricing sublime beauty of the value of dawn song in spring.

Here are a few of the watershed community goods and services:

- Watershed plants, microbes and soils act as chemical renovators, biocyclers, and filters of water quality. Clay soils are still the best free filters known. Neither virus nor harmful bacteria escape their abilities. For instance,

constructed and natural wetlands cleanse runoff pollution from feedlots, highways, acid mine drainage, clearcuts, polish treated wastewater, and restore some of the habitat destroyed during development.

- Free-running creeks and rivers with their rapids and waterfalls aerate the flow increasing its water purification and supporting salmonid fish.

- Watershed plant life modulates solar energy collection by shading the ground, humidifies and filters the air, and changes the color of the watershed surface compared to surface textures such as asphalt. The Forest Service has estimated that tens of millions of dollars in cooling bills could be saved by urban and desert-city reforestation and many millions saved in health costs.

- Watersheds act as valves of waterflow. They can convert runoff to storage in wetlands or percolate water into soil and bedrock reducing, for free, peak flood damage and flows.

- Watersheds in equilibrium (without massive roadcuts or strip-mining or site clearing) act as hillslope stabilizers, replacing the need for buttresses and sediment traps.

- Stable watersheds are the ultimate production

systems for all animals, their food and shelter. They are the most logical geographic unity for ecosystem management. They are the local green machines of photosynthesis. They prosper when the drainage net, channel, and hillslopes detain water and encourage growth (See “Lingo” page 8). Green growth is a basic production, ultimately more important than industrial production.

In short, drainage nets etch an equilibrium pattern into the watershed’s surface. The drainage net balances channel size and shape with hillslope runoff. Upsetting this balance by paving, channelization, earth moving, and excessive streamflow diversions upsets the balance and leads to huge maintenance or techno-fix costs and reductions in beauty. Love and work with your watershed’s drainage net, respect its resilient peaks, and cherish its living creatures. Reverence and restorative economics can be the river’s voice. ◀

*Peter Warshall wrote the classic watershed issues for the Coevolution Quarterly (Winter 1976/77), now the Whole Earth Review. He has worked on watershed and community issues in the American West and Africa.*

### Grassroots Voices on Watershed Efforts

Saginaw Basin Alliance, MI

*“One of our greatest challenges is addressing the diversity of land-use issues within the Basin. From highly industrialized Flint and Saginaw to near wilderness in some of the northern range, we respect and invite all to participate. One powerful and essential tool that has helped us address a broad array of interests is education. The Saginaw Basin Alliance’s Water Watcher program has reached people of all ages throughout the watershed. The program has bridged the gaps of generations, creed, color, and class to enlighten people on the issues across the Basin.”*

**Barbara Short,**  
Environmental Coordinator  
for Board of Directors

The 8,800-square-mile Saginaw River Basin is the most contaminated site in Michigan and one of the top five in the country. The SBA is the citizen-action arm of the Saginaw Bay National Watershed Initiative, a major planning and management effort involving numerous public and private interests.

Contact SBA, SVSU  
Pioneer Annex 9-A,  
University Center, MI 487 10,  
(517) 791-7341. ▶



by Peter Warshall

# Learning the Watershed Lingo

**W**atershed and river basins. In England, *watershed* meant the parting or separation of waters. It was the *boundary* line along the ridge that separated rainfall into one creek versus another. In the U.S., we call this the divide, the watershed divide.

In the U.S., *watershed* means the total surface of the land over which water flows, not just the divide (although literary types still use "watershed" to mean a significant dividing point). It is an **area of land** which drains water, sediment and dissolved materials to the channel of the creek. In Europe, they use the word catchment area or drainage basin.

A *river basin* is just a whole bunch of watersheds lumped together. There is no hard rule about how many watersheds you have to have before you can call it a river basin. In the U.S., watershed programs deal with 10 to tens of thousands of acres. River basins deal with hundreds to thousands of square miles. But, you can say the "Mississippi watershed" and still be correct.

**Hillslope and channel.** The pieces of a watershed that require a cultivated eye are its *hillslopes* that feed runoff to the more indented channel. In the Everglades, the "hills" are so low and flat and the channels so ill-defined that hillslope/channel investigators just can't decide which is which. In parts of the Grand Canyon, the hills are so steep and tall that they are canyon walls without surface runoff. When watersheds are less extreme, there is an area that is sometimes "hillslope" and sometimes "channel" depending on rain and floods. This is called the *riparian* zone (riverside)-a good indicator of channel and hillslope stability.

The tributaries that connect channel flow and collect surface flow form unique leaflike patterns called *drainage networks*. In the study of flood

design, riparian restoration, runoff pollution, hillslope stability and sediment production management, the drainage network becomes the focus of practical implementation.

**Types of waterflows.** The ways water flows dictates the technical and social solutions required. The most important are *instream flows* (the amount of water left in a channel after all the human *off-stream* claims have been met.) The instream flow will determine if fish can remain, which kind of fish, and their abundance. Instream flows also influence the riparian and creekside plant communities. A major watershed concern is maintaining seasonal instream flows and instream flow quality.

Watershed care within river channels has two different doctors, one for *upstream* and one for *downstream*. Upstream flows require a checkup of all the activities that harm or benefit the water arriving at the point where you live or play. You have a strong legal right to insist that the quality and quantity of waterflow coming from upstream is beneficial to your needs. Similarly, what you do with the water (e.g., extract it and return it as sewage) can set the best example for proper care. If you extract minimal amounts, reuse them, and return some to the creek in good or better quality, then good news goes downstream and frees your community from political turmoil.

Some waterflow seeps into the soil (*soil moisture*) and some goes deeper (*groundwater*). The groundwater can follow a maze of cracks in the bedrock and leave the watershed. *Groundwater basins* do not always conform to watersheds. Reconciling aboveground flows with underground flows and wells with river diversions is one of the most tricky legal and technical tasks of river savers.

Springs and outfall pipes gush water from a single opening. They are

called *point* sources. On the other hand, rain that washes the streets and fields and parking lots and roofs of a community (even if it winds up in a storm sewer) is called *nonpoint* source. Watershed management is the only administrative form that can deal with nonpoint pollution from surface runoff. The perpetrators may be many (cars on a highway) and responsibilities are most-times ill-defined.

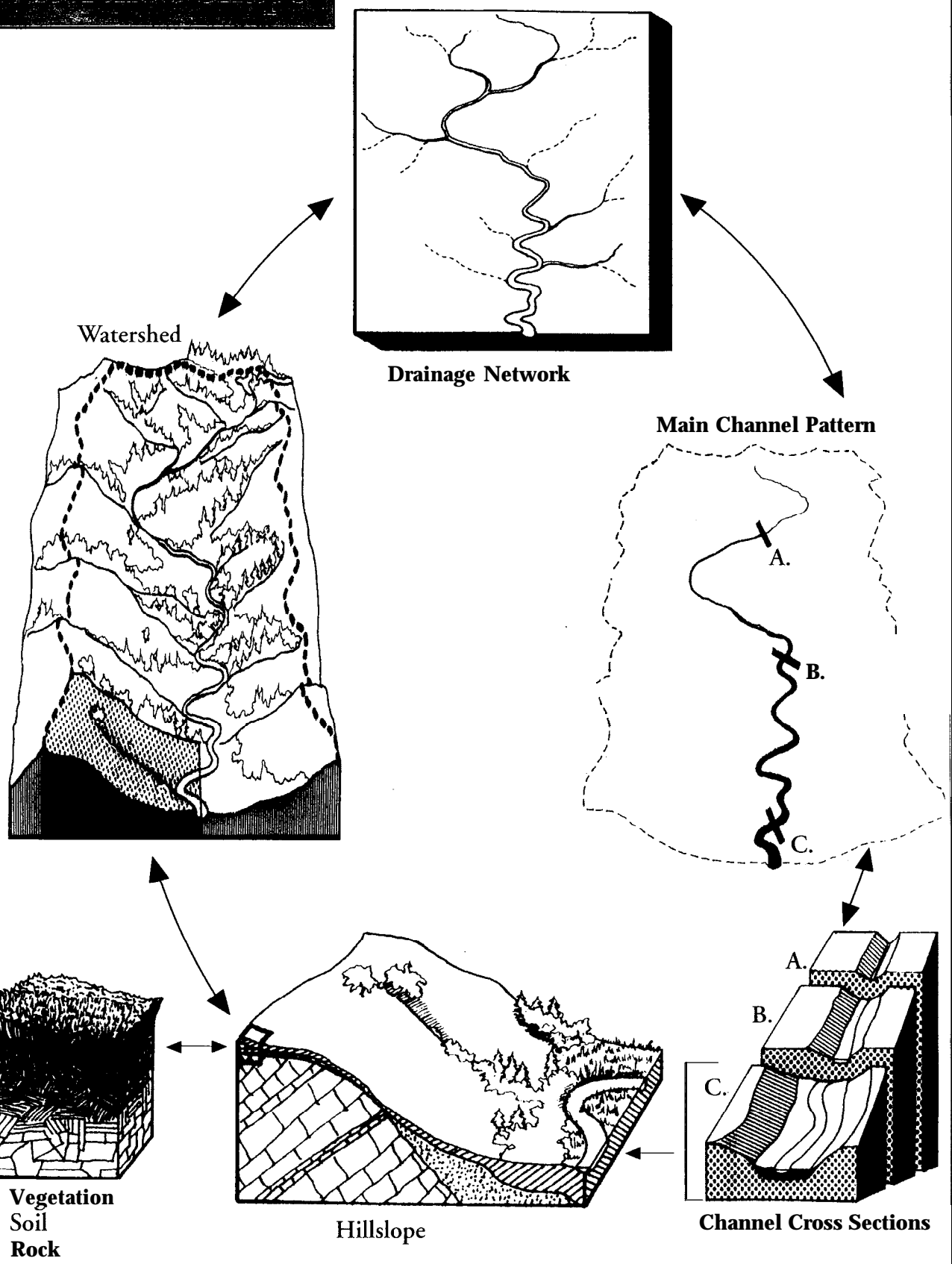
**Airshed.** Just like groundwater basins, the *airshed* complicates watershed management. Acid-laden dust may come from miles away and settle in your watershed, harming the fish populations of the forest. Airsheds are fickle but it is important to learn the direction of airflows (wind) that eventually drop rain, snow, dust, and aerosols in your watershed.

**Indicator species.** If you're lucky the abundance of a single species or two will accurately reflect the health of your watershed. These plants or animals are "totemic" and should be revered on citizen group logos or at celebrations of creek and river restoration. The salmon is typical but so are cottonwoods or certain mussels in the southeast.

**Inter-basin transfers.** Besides groundwater basins and airsheds confounding the boundaries of watersheds, human-constructed waterworks that cross watershed divides and mix waters from different rivers cause all kinds of administrative and ecological havoc. Any city-dweller must contemplate river basins and greatly altered instream flows when pursuing watershed restoration. ☞

*The above is part of Peter Warshall's ongoing project "Gathering Waters," a look at human communities and sustainable watersheds. This excerpt is part of his work to make technical information more available to the public.*





The watershed is a physical gatherer. Its surface of soils, rocks, and plant life forms a "commons" for the intermingling of sun, water and nutrient.

# Does Anybody Really Do Watershed Management?

## Experiences from Across America Indicate Progress, but a Long Road Ahead

by Chuck Hoffman

Over the past 10 years, more and more people have come to believe that a watershed-based approach to pollution control is needed if this nation is to prevent degradation of its waterways and meet its elusive but noble 'fishable and swimmable' water quality goals. The past decade has seen the rapid development of the watershed-based idea as agencies and interest groups have grappled with the question of how to actually do watershed-based planning: how to pay for it, legislate and regulate for it; what services to provide; what institutional structure to use; and other questions.

Many new watershed-based organizations have formed to attempt to control pollution using a watershed approach. These groups join older, established organizations such as littoral societies that have always provided some watershed-based pollution control services, but are now considering an expanded role for themselves or others as the focus continues to shift away from cleaning up discharges out of pipes and toward controlling both point and nonpoint source pollution.

Not surprisingly, most public and private watershed efforts to date have not focused on a broad spectrum of action. The traditional view of 'watershed equals nonpoint' has prevailed. Ecologists will argue there is much more involved, including protection of the riparian zone and river corridors, careful conservation of stream headwater areas, management of habitat for flora and fauna, restorative activities and more.

While there is general technical agreement on what constitutes a watershed, there is little or no agreement on what constitutes a watershed management organization. Many programs, especially nonprofit organizations, say they are watershed organizations, but few are able to deliver the economic means or organizational services necessary to actually manage and protect a watershed. What is true is that more organizations are developing a watershed outlook. This is an awareness and acknowledgment of the need for watershed management, even if they do not have the means to deliver watershed services.

Since the Clean Water Act is up for reauthorization this year, the time seems right to examine these various efforts across the nation, to see what approaches are being used, and which seem to be successful. To this end, the U.S. EPA entered into a contract with the River Federation to examine the status of watershed-based programs across the nation.

We examined nearly 100 watershed programs before settling on 29 (refer to list in sidebar on page 11) to analyze in detail through literature searches, interviews, and surveys

of program managers. In short, we wanted to determine if there was a 'model' emerging for what a successful program looks like in different regional settings, with an eye toward determining how the federal government can best help these efforts to progress.

For the grassroots river and watershed advocacy organization this article (and the full report) may be helpful in a number of different ways by: providing examples of numerous existing watershed programs useful as evidence to support the establishment of new and better watershed programs elsewhere; illustrating the broad variety of watershed program options; and outlining the critical elements necessary for a successful watershed program.

### Characteristics of Current Watershed-Oriented Programs

Our study examined several characteristics of the 29 programs, including: the geographic scope, organizational structures, resource management techniques, opportunities for voluntary participation, public involvement and education programs, monitoring systems, staffing and funding. Here is a brief synopsis of what we found and its significance.

**Geographic Scope.** The geographic scale of these programs varies greatly. Ten of the programs profiled cover less than 200 square miles in area. Another 10 ranged in area from 4,000 to 18,000 square miles. The largest one topped out at more than 200,000 square miles.

The size of the management area has substantial implications for EPA and other agencies. Focusing on small watersheds in rural areas can have a significant impact on water quality and the fishery without excessive cost. However, more than 15,000 such projects of 200 square miles or less could fit into the land area of the continental 48 states. Given that the average small project reviewed in this study costs about \$3 million, coverage of all rural areas would cost \$45 billion, not counting urban controls, the advance assessments, operation and maintenance, management enforcement, and monitoring. This will present challenges to government agencies in defining the appropriate scopes of future watershed management programs.

The one government agency that has been active on a watershed basis for decades is the Soil Conservation Service (SCS), an agency within the U.S. Department of Agriculture. It operates local and water conservation districts throughout the country. The small watershed projects developed under its most commonly used authority, P.L. 566, average about 250 square miles in area.

*(continued on page 11)*

Other than SCS, there are only a few entities that actually operate on a watershed basis, and most of these were established by the states.

The states do have the power to create bodies that can address whole watersheds. Depending on state constitutions and traditions, these bodies can be imbued with simple coordinating and communication powers, or they can be given extraordinary powers, as has happened with the Chesapeake Bay Critical Area Commission, the New Jersey Pinelands Commission, and the Mississippi Headwaters Board.

In the case of urban areas, regional planning agencies and councils of government are not organized on a watershed basis. They will need cooperation from other parties to match the management and jurisdiction structure to the watershed. Given the states' differing support for council of government-type operations, this may not be easy to do.

Organizational Structure. The legal and organizational structures through which the selected programs operate varies greatly. In general, they fall into five categories: (1) federal compacts for interstate organizations; (2) normal state programs operated by state agencies; (3) specially authorized state programs operated by semi-independent agencies or joint power boards; (4) cooperative projects operating without a formal and centralized management structure; and (5) nonprofit organizations whose members are government agencies or units of government.

The most common denominator of all the profiled programs is that 20 were initiated wholly or partially by the states. The states can readily create watershed partnerships with the credibility to accomplish the goals set out for them. The best choice is to build more capabilities within the responsible state agencies and have them organize affected political subdivisions into watershed management groups through Memoranda of Understanding or special powers legislation. Wisconsin's Priority Watershed Program is an example of a good program implemented primarily by ongoing state programs.

Resource Management Techniques. The programs we profiled employ over 50 practices, programs, and authorities to control nonpoint sources of pollution. The mixture depends on how the program was originally established, and what the primary issues are that it has addressed to date. In general, these techniques can be grouped into seven categories: (1) permit and planning powers (review, approval, consistency power over plans and permits, etc.); (2) urban watershed practices (stabilization of critical areas,

### Watershed Programs Profiled in "Institutional Frameworks for Watershed Management Programs"

#### *Multistate*

Delaware River Basin Commission  
Interstate Commission for the Potomac River Basin  
Ohio River Sanitation Commission

#### *State*

Arizona Active Management Area Program  
Maryland Chesapeake Bay Critical Area Commission  
Nebraska Natural Resource District Program  
Wisconsin **Nonpoint** Source Pollution Abatement Program  
Vermont **Nonpoint** Source Pollution Control Program

#### *Regional*

Cape Cod Commission - MA  
New Jersey Pinelands Commission - NJ  
Northwest Florida Water Management District - FL  
Phoenix Active Management Area - AZ  
South Florida Water Management District - FL

#### *River or Watershed*

Anacostia River - MD and DC  
Barnegat Bay Estuary Program - NJ  
Black Earth Creek **Priority Watershed** Project - WI  
Grande Ronde Critical Basin Project - OR  
Guadalupe-Blanco River Authority - TX  
Menomonee River Priority Watershed Project - WI  
Middle Fork River - WV  
Mississippi Headwaters Board - MN  
Nisqually River Council - WA  
Lower East Branch Pecatonica River Priority Watershed Project - WI  
Puget Sound Water Quality Authority - WA  
Suwannee River Water Management District - FL  
Sweetwater Authority - CA  
Tualitan River Critical Basin Project - OR  
Upper Delaware Scenic and Recreational River - NY and PA  
Watershed Committee of the Ozarks - MO

shoreline buffers, street-sweeping, etc.); (3) land use management practices (minimum lot sizes, cluster development, wellhead protection, etc.); (4) agricultural, silvicultural, and riling practices; (5) groundwater/aquifer management practices; (6) acquisition, easements, development credits, and transfers of development rights; and (7) fishery enhancement and wetlands creation.

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## Does Anybody Really Do Watershed Management (continued from page 11)

photo by Tim Palmer



**The watershed program for the Grande Ronde River, OR (above) exists in part due to litigation by environmental organizations in the Northwest.**

**This article is a summary of a report "Institutional Frameworks for Watershed Management Programs," (EPA 230-R-94-003). Copies of the full report can be obtained while supplies last from River Federation, 8630 Fenton Street, Suite 910, Silver Spring, MD 20910. Please include \$4 for postage.**

What became clear over the course of the analysis is that project managers must have a balanced combination of these capabilities to be successful. This means that (1) there must be an adequate and appropriate set of installable practices that actually reduce pollution; (2) the management programs must be sufficiently funded, staffed, trained, and empowered to create positive and continuous action; and (3) the legal authorities must be there to ensure implementation by all parties in and out of government.

Land use controls, street sweeping, urban housekeeping ordinances, and education programs appear to produce benefits, and they remain the cost-efficient choice for addressing some aspects of urban nonpoint problems. Watershed managers would do well to examine how land use powers have been integrated into state and federal river and land conservation plans. Good examples are the Mississippi Headwaters Board, the Pinelands Commission, and the Upper Delaware Scenic and Recreational River.

Opportunities for Voluntary Participation. Most programs rely to some degree on voluntary participation for their success, so it is no surprise that each of the profiled programs has developed a public involvement program or an open planning process to leverage more participation. Voluntary steps can be taken

either by private landowners or by other units of government.

A big issue in watershed management is convincing private land operators to install best management practices. This appears to depend on two factors: the quality and training of assigned program personnel and their ability to negotiate with and assist the landowners and operators, and the level of subsidized support for the installed best management practices. Again, the Wisconsin's Priority Watershed Program has a good voluntary participation program involving the skilled staff of the University of Wisconsin Extension.

Public Involvement and Educational Programs. Nearly every program profiled has an ongoing educational or grassroots involvement program. The public involvement programs reviewed here have four different methods of operation. The first, as represented by the Watershed Committee of the Ozarks, places private citizens on boards that make policy decisions regarding the direction of the program. The second, as represented by the Menomonee River Priority Watershed, uses a citizens advisory committee approach to gathering public comment about the study and planning process. The third and most common method is to use an educational program to inform the public about the watershed project. The fourth is typified by the Anacostia Watershed Restoration Committee which uses citizen participation in direct, hands-on stream restoration projects. These techniques all have merit and should be built into all future programs as appropriate.

Monitoring Systems. Many of the programs profiled use geographic information systems (GIS) to track changing conditions and to guide decision-making. This tactic is bogged down in some states as they work to convert disparate GIS databases into compatible systems. Some programs used aerial fly-overs to check for recent land use changes, while others seek placement of the newest water quality gauging stations. Several of these programs use RiverWatch or Save Our Streams programs that make use of volunteers and school children to track some key water quality indicators.

Watershed programs use monitoring for three different purposes: (1) to acquire baseline data from which to make future management decisions; (2) to review the enforcement and effectiveness of management standards already in place; and (3) as

an educational tool for involving the public in water quality issues.

**Staffing.** The managers whom the reviewers interviewed generally agree that implementing watershed management programs is a time-consuming, labor-intensive process that requires a large amount of personal interaction between project managers, local governments, and those entities that would install best management practices on their land or property.

**Funding** continues to be the issue on which the success of these programs depend. Base funding levels range typically from \$100,000 to \$5 million per program.

Half the programs profiled depend on state legislative appropriations for base funding, while four others in two states receive funding from voter-approved bonds. The significant dependence on state legislative funding underscores the relationship between watershed management programs and state sponsorship. Unless a new source of primary funding is provided, it seems reasonable to nurture the relationship between the states and watershed management. None of the state programs, however, are funded well enough to handle anything but rural nonpoint programs and low-cost urban programs. The questions of how to address urban stormwater retention/detention and combined sewer overflows remain unanswered.

Service revenues, property taxes, ad valorem taxes, member contributions (the interstate compacts receive money from their state members), and county or municipal appropriations account for the balance of primary funding sources. Only one project was funded primarily through direct congressional appropriation. Half the programs receive special EPA contract or grant funds either directly or indirectly through a state agency. Only one program depended on EPA as its primary revenue source.

Many programs have received funds from several special sources. Many of the programs have received EPA funding from one or more of the following authorities: Section 319 stormwater management, Section 106 authorities, Section 205j, Section 604b, and Coastal Zone Management. Other sources of funds include the U.S. Geological Survey, the U.S. Army Corps of Engineers, the Department of Agriculture (Forest Service, Agricultural Conservation and Stabilization Service, or Soil Conservation Service) and the National Park Service. Funding has ranged from \$15,000 to \$5 million.

### **What Makes a Successful Watershed Program**

Our analysis indicates that a true watershed management program should have the following characteristics at minimum:

- Its geographic scope should be at the watershed or sub-watershed level.
- These programs should be based upon a cooperative planning and management approach.
- There should be a system for involving the public and providing education.
- A logical process for identifying priority watershed is essential for any future watershed management program.
- There should be a dependable and renewable source of funding.
- The program should be comprehensive in scope, combining management of water resources, water quality, land use, flora and fauna, riparian zones, headwaters, and corridors.
- It has the financial and legal or statutory capabilities with which to implement and enforce its plan of management.

To date, there are very few programs that are both watershed-oriented and comprehensive, although the states are steadily moving in that direction. It seems reasonable to

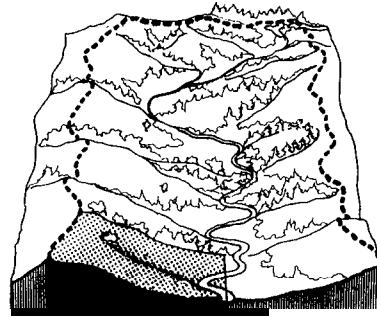
### **Criteria Used for Selection by the Watershed Program Surveyors**

- Geographic scope and focus of activity is on an entire watershed or subwatershed and is sufficiently large (80 or more square miles) to be valuable as a federal or state model
- Comprehensive in nature; that is it concentrates on as wide a range of water resources management and protection as possible
- Ecosystem approach, intentional management strategy that relates the health of one area of the watershed to the remaining parts
- Not primarily concerned with point source discharges
- Includes a program for the control of **nonpoint** sources of water pollution
- The financial and legal statutory capabilities with which to implement and enforce its plan of management are established
- The management plan includes an evaluation of the program

conclude that many of the better programs of today will be adapted to carry on a broader notion of watershed protection in the future. Grassroots, state and regional river groups can build on the momentum of a growing watershed movement through education, support, and collaboration with government officials involved in all aspects of water resources management. Watershed management is too big of a job for either to do alone. ◀

*Chuck Hoffman is a river management consultant with Hoffman, Williams, Lafen & Fletcher of Silver Spring, Maryland. He also serves as executive director of the River Federation, the national association for state and local river conservation programs.*

# References on Watershed Protection



## Some of the Best Watershed References

*Institutional Frameworks for Watershed Management Programs: Profiles and Analysis of Selected Programs* (US EPA; Policy, Planning, and Evaluation (2124), EPA 230-R-94-003, March 1994), Available from River Federation, 8630 Fenton Street, Suite 910, Silver Spring, MD 20910. Send \$4 for shipping.

*Entering the Watershed: A New Approach to Save America; River Ecosystems* by Pacific Rivers Council. Recommends a comprehensive new approach to river protection based on principles of watershed dynamics, ecosystem function, and conservation biology—a nationwide, strategic community- and ecosystem-based watershed restoration initiative. 368 pages, \$30. Contact PRC, PO. Box 309, Eugene, OR 97440.

*Watershed Symposia: A Foundation for Building Healthy Communities and Rivers, A Workbook* by Pacific Rivers Council. Describes how to organize a successful watershed symposium, including example materials, 36 pages., \$10. Contact PRC, PO Box 309, Eugene, OR 97440.

*Restoration of Aquatic Ecosystems: Science, Technology and Public Policy* by National Academy Press, Washington, D.C., 1992. A state-of-the-art reference. Available for \$40 from Island Press (800) 828-1302.

*Watershed Restoration Sourcebook*. An indispensable manual on urban watershed restoration techniques. 268 pages., 1992. Anacostia Restoration Team. Available for \$35 from Metro Washington Council of Governments, 777 N. Capital St., NE, Suite 300, Washington, D.C. 20002-4226, (202) 962-3256.

*Effective Watershed Management for Surface Water Supplies* by Richard Robbins, et. al., prepared for American Water Works Association Research Foundation. A report on practical, effective solutions and techniques that have been implemented by water utilities and other agencies in protecting water supplies. Includes information on needs assessments, control techniques, monitoring, implementation, and 24 watershed management case studies. Available for \$60 from AWWA, 6666 W. Quincy Ave., Denver, CO 80235, (303) 794-77 11.

*An Atlas of Massachusetts River Systems: Environmental Designs of the Future* by Walter Bickford and U.J. Dymon, 1990. An

excellent model for public education materials on watersheds and river values with superb graphics. Available for \$15 from University of Massachusetts Press, Box 429, Amherst, MA 01004, (413) 545-2219.

*Restoring the Big River: A Clean Water Act Blueprint for the Mississippi* by Ann Robinson, Izaak Walton League and Robbin Marks, National Resources Defense Council, February 1994. Describes a watershed approach to protecting and restoring the Mississippi. Contact IWLA, 5701 Normandale Road, Suite 317, Minneapolis, MN 55424.

*Improving Local Efforts to Resolve Watershed Management Problems: A Report from the Oregon Watershed Forum* (March 1992) Features eight watershed management cases from Oregon and lessons learned. Contact Columbia-Blue Mt. RC & D at (503) 278-3831.

*Watershed Management Council Newsletter*. The WMC, based out of the Water Resources Center at University of California-Davis, publishes this quarterly newsletter with a distinctly Western perspective on watershed management. WMC, c/o Neil Berg, USFS-PSW Station, PO Box 245, Berkeley, CA 94701.



## Watershed Conference Proceedings

*Watershed '33: A National Conference on Watershed Management* (Alexandria, VA in March 1993), 890 pages. Available free from The National Center for Environmental Publications and Information, 11029 Kenwood, Cincinnati, OH 45242, (513) 569-7980.

*Watershed Management Conference Summary* hosted by the Western Governors' Association, (Boise, ID in February 1994). Contact Western Governors' Association, 600 17th Street, Suite 1705 South Tower, Denver, CO 80202-5452, (303) 623-9378. Available late summer 1994 for a nominal fee.



## U.S. EPA Watershed Publications

US EPA, 401 M Street, SW, Washington, D.C. 20460

*Watershed Protection: Catalog of Federal Programs*, A directory of federal programs that contribute to and participate in

watershed management, including information on funding sources. Office of Water (WH-553), EPA-841-B-93-002, March 1993.

*The Watershed Protection Approach: An Overview*, Office of Water (WH-556F), EPA/503/9-92/002, December 1991.

*The Watershed Protection Approach, Annual Report 1992*, Summarizes EPA activities to adopt and implement watershed management, including summaries for 30 projects. Office of Water (WH-556-F) EPA/840/5/93/001, January 1993.

*Nonpoint Source News Notes*, A periodic bulletin dealing with the condition of the water-related environment, the control of nonpoint sources of water pollution and the ecologically sensitive management and restoration of watersheds. Free. Contact Terrene Institute, 1717 K Street, NW, Suite 801, Washington, D.C. 20006.

*US EPA Watershed Events*, A bulletin on integrated aquatic ecosystem protection. Office of Water, (WH-556F).

*US EPA Nonpoint Source Information Exchange Computer Bulletin Board System User's Manual*, a nationwide forum for open discussion and information exchange on watershed restoration and other pertinent topics. (EPA/503/8-92/002)



### Other Organizations

Center for Watershed Protection, a nonprofit organization for the protection, restoration and stewardship of streams, rivers, lakes, ponds, wetlands, and groundwaters through the advancement of a holistic watershed approach. Services include: *Watershed Protection Techniques: A Quarterly Bulletin on Urban Watershed Restoration & Protection Tools*, best practice design manual series, training seminars, watershed education and technical assistance to governments.

Headquarters: 1020 Elden Street, Suite 205, Herndon, VA 22070, (703) 709-0040. Maryland Office: 8630 Fenton Street, Suite 910, Silver Spring, MD 20910, (301) 589-1890

National Watershed Coalition, "an alliance of national, regional, state and local associations and organizations that advocates the use of the watershed or hydrologic unit concept when assessing natural resource issues." Major emphasis is on USDA's (Soil Conservation Service) Small Watershed Protection and Flood Prevention Program (PL 83-566). Contact NWC, 9150 West Jewell Avenue, Suite 102, Lakewood, CO, 80232-6469, (303) 988-1810. ◀

### Grassroots Voices on Watershed Efforts:



Henry's Fork  
Watershed Council, ID

*"We need to clarify the misunderstanding that 'consensus' can only be achieved through 'compromise.' Rather than settling for 'common ground,' we had better be moving to 'higher ground' where achieving harmony among all interests becomes far more important than plunking ourselves down between two extremes. If the Henry's Fork Watershed Council is going to succeed, our commitment to use a consensus approach to decision making will require a solidarity never before experienced in this basin."*

Janice Brown, Executive Director, Henry's Fork Foundation

The Henry's Fork Watershed includes the southwest corner of Yellowstone, the western slope of the Teton Mountains, the Island Park Caldera. and many potato, hay and grain farms in Eastern Idaho. With its world-class trout fishery, the Henry's Fork of the Snake River is increasingly being used for recreational purposes. Past attempts by government agencies to isolate local issues and manage the 2-million-acre basin with its changing needs only resulted in polarization of conservation and development interests until 1993 when the Idaho State legislature finally approved the Henry's Fork Basin Plan as part of the state's comprehensive water planning process.

To help implement the plan, the Henry's Fork Foundation advanced the concept of the Henry's Fork Watershed Council, now co-facilitated by the Henry's Fork Foundation, 700 sportspeople and the Fremont-Madison Irrigation District's 1,700 farmers with approval and support of local, state and federal agencies. By honing their facilitation skills through training workshops and building trust between irrigators and fly fishers, the two former adversaries hope to model respectful, non-adversarial behavior for the entire Council that involves more than 25 governmental entities; 30 commodity, conservation and community interests; and 20 technicians and scientists.

Although the Council is less than one year old, it shows great promise and may serve as an example for other watershed efforts. The Council operates with a community-building philosophy based on consensus and is dedicated to: cooperate in research and planning, review and critique proposed watershed projects, identify and coordinate funding sources, and serve as an educational resource.

Contact: HFF, PO Box 61, Island Park, ID 83429, (208) 558-9041 or FMID, 350 N. 6th W., St. Anthony, ID 83445 (208) 624-3381. ▶

# How To Save A River

## A HANDBOOK FOR CITIZEN ACTION

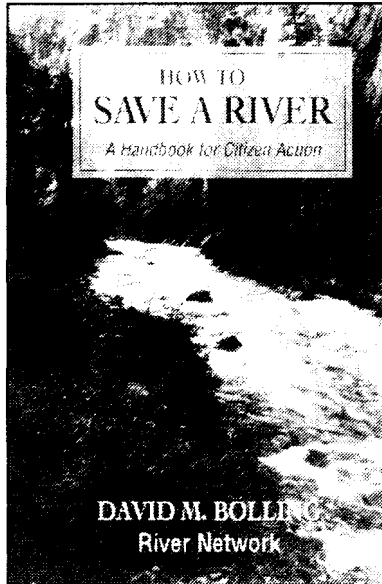
A RIVER NETWORK PUBLICATION BY DAVID BOLLING

Rivers represent both one of the most essential and most vulnerable of natural systems. They sustain the ecosystems that support most of life, but are in constant danger from diversion, damming, pollution, development, and a host of other abuses. Such a combination of susceptibility and importance make river protection one of the central environmental missions of our time.

*How to Save a River* presents in a concise and readable format the wisdom gained from years of river protection campaigns across the United States. The book begins by defining general principles of action, including getting organized, planning a campaign, building public support, and putting a plan into action.

*How to Save a River* provides an important overview of the resource issues involved in river protection, and suggests sources for further investigation. Numerous examples of successful river protection campaigns prove that ordinary citizens do have the power to create change when they know how to organize themselves.

David Bolling is an award-winning journalist who has written



about rivers and river issues for more than 20 years. He is cofounder and president of Friends of the Russian River and former executive director of Friends of the River.

The book runs 300 pages, photos, index. Paperback: ISBN 1-55963-250-X. Available in July 1994.

"This book is the best I have seen for river conservation. The broad coverage and range of examples is unprecedented, and gives all of us points of entry and key arguments and data for river saving. David Bolling writes beautifully, illuminating complicated topics with clarity and sensitivity based on long experience. How did we ever save rivers without it?"

*David Bolling, National Park Service  
Portland, Oregon*

"River Network's book, *How to Save a River* is a 'must read' for both the volunteer novice and the long time professional. Author David Bolling has captured the very essence of success in each of the most critical river saving efforts of our time and served it up in a most readable and compelling way."

*Karen J. Cray, President  
American Rivers*

"I was torn between finishing this entertaining, well written and informative book and rushing out to try to resuscitate my local North Fork of the Gunnison River."

*Ed Mastro, Publisher  
High Country News*

Yes, I would like to order *How to Save a River* by David Bolling. \_\_\_\_\_ Paperback copies @ \$14.00 each (suggested price is \$17.00) Please enclose a check and add \$4.00 for shipping and handling of first book, \$1.00 for each additional. River Network Partners receive one FREE copy of *How to Save a River*, and can purchase additional copies @ \$12.00 each, plus shipping and handling. For more information, contact River Network at (BOO) 423-6747. Send orders payable to: River Network, PO Box 8787, Portland, OR 97207-8787

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City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Phone( ) \_\_\_\_\_



## Publications

**Model Bylaws for River Advocacy and Protection Organizations** by Pete Lavigne. (1993, 8 pgs, Partners \$3, others \$5)

**Protecting Instream Flows: A Resource Guide for River Guardians** by Neil Schulman. (1993, 90 pgs, Partners \$8, others \$10)

**"Outfitter and Guest Fund Raising: The Pass-Through Contribution Model"** by Kevin Wolf and Rob Elliott. (revised 1993, 8 pgs, Partners \$3, others \$5)

**C(3) or C(4): Choosing Your Tax Exempt Status** by Chris Cook. (1991, 16 pgs, Partners \$3, others \$5)

**People Protecting Rivers: A Collection of Lessons from Grassroots Activists** by Phillip Wallin and Rita Haberman. (1992, 72 pgs, Partners \$8, others \$10)

**River Wise** by Kenny Johnson, Shauna Whidden and Lindy Walsh. A collection of public education techniques. (1992, 33 pgs, Partners \$5, others \$7)

**River Voices** (back issues still in print)  
(16-20 pgs, Partners \$3, others \$4).

V5N1 ('94)	Board Development
V4N4 ('93)	Floodplain Management
V4N3 ('93)	1993 National Survey Results
V4N2 ('93)	Public Trust Doctrine (reprint)
V4N1 ('93)	Water Efficiency (photocopy)
V3N4 ('92)	Business & labor as Allies
V3N3 ('92)	Clean Water Act (photocopy)
V3N2 ('92)	"Wise" Use Movement (photocopy)
V3N1 ('92)	River Corridor Protection
V2N3 ('91)	Volunteer Water Monitoring
V2N2 ('91)	Sorting Through Protection Tools
V2N1 ('91)	1990 National Survey Results
V1N3 ('90)	River Values (free)
V1N2 ('90)	Dealing with Private land-the (free)

**LOTUS 123 Computer Software River Network is offering'** a free copy of Lotus 123 software to River Network Partners.

**Fundraising Videos** River Network will lend the following fundraising workshop videos: *Planning for Fundraising, Special Events, The Role of the Board, Asking for Money & Prospect Identification, Major Gift Solicitation, and Raising Money by Mail* by Kim Klein, a national fundraising trainer. River Network loans out the videos, one at a time with a \$50 refundable deposit. (For Partners only.)

If you are looking for the usual **"River Fundraising Alert"** it will not appear in *River Voices* anymore, but instead be mailed specifically to our River Network Partners. Past issues have addressed topics like how to get your board involved in raising money and leads on foundation funding and deadlines. Don't miss an issue, sign up to become a River Network Partner today!

Photo by Deb Sikora



**The St. Croix River is one of the original National Wild and Scenic Rivers designated in 1968.**

## Grassroots Voices on Watershed Efforts: St. Croix Watershed Network, MN and WI

"Begin at the beginning. Our study started with a description of the pre-settlement conditions in our 1,470-square-mile watershed. We found that people were hungry for information about the natural history, and then the cultural history, of the watershed. Once they became aware of the diversity and value of the area, and how they have been affected by human settlement, they began to envision how to save what is left. Knowledge of the past, combined with a vision for the future provided the energy and support to act as stewards today.

The number one tool we used to increase people's awareness was to create a simple map showing the boundaries and drainage pattern of the watershed. Then we asked people to think of themselves as citizens of this watershed, much like they would normally think of themselves as citizens of a city, township or state. It was magic. The idea that 'we are all in this watershed together, and that this is our community and its welfare is our responsibility' empowered people to take a new look at their relationships with each other and their environment.

Our final report emphasizes that the watershed is comprised of natural, agricultural and cultural landscapes, all important and worthy of our care. Thus we avoided, I hope, the all-too-common 'people against the environment' polarization of thinking and people. The new organization we formed, The St. Croix Watershed Network, is focusing on the common values of our watershed community and then finding the most appropriate (and sometimes only politically acceptable) resource protection tools that will work in a given neighborhood. Often we found that public/private partnerships evolved to solve local problems, where a state or federal agency 'fix' was not welcome."

Dan McGuiness, Minnesota-Wisconsin Boundary Area Commission

Contact MWBAC, 619 Second Street, Hudson, WI 54016, (715) 386-9444. 🐟

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*Becoming a River Network Partner will help you save your river by:*

- Giving you access to assistance on fundraising, river topics, organizational development, and strategies;
- Enabling you to share information and learn from other river guardians;
- Making it possible for you to work collectively with hundreds of other river guardians on national policy issues critical to all of America's rivers.

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*Funding Alerts*-We'll provide you with quarterly bulletins on new foundation/corporate prospects, free resources, new techniques and hot tips.

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*Referrals*-River Network staff can direct you to professional fundraisers and experienced river guardians willing to share their expertise.

*How-to References*-Articles, publications and videos about all aspects of fundraising will be available to you at your request. Directories of funding sources for river conservation are also available.

*Workshops*-You can receive information about invitations and discounts on seminars covering fundraising topics of interest to river groups.

### River Issue Information

*Directory of River Information Specialists* (DORIS)&River Network offers a cutting-edge referral service that links up river guardians to volunteer specialists with expertise in river protection. More than 500 river specialists within conservation or-

ganizations, professional societies, and state and federal agencies, participate in DORIS to share their strategies and provide advice.

*River Issue Research*-Upon request, staff provide one-on-one advice and assistance in collecting information about river issues, threats, and protection tools.

*River Voices*--We'll mail you the quarterly publication of River Network covering river-saving issues with background information, feature stories, and more.

*River Action Alerts*-Timely bulletins with information about significant pending national and state river policy issues with implications for local rivers and information about how you can get involved.

### Organizational Materials

*How-to References*-You can receive articles and books about the many issues related to starting and running a successful non-

*Thank you for the ongoing flow of helpful information. Becoming a River Network Partner is certainly some of the best money I have ever spent. I can't wait for my free copy of the new book "How to Save a River."*

— George Cofer  
Save Barton Creek Association, TX

profit river organization, and the complex problems that you face.

*Model materials*-You can save yourself hours of work by requesting our best model materials-mission statements, newsletters, bylaws, and action plans-produced by river groups across the country.

*Computer software* programs-River Network offers you the incredible advantage of computer databases and spreadsheets to assist you in information management.

### Campaign Strategies

*Networking*-To save you precious time, staff will refer you to other river guardians who have successfully addressed the same river threats that you are working on.

*Case Studies*-You can learn from documented success stories of river conservation presented as practical lessons transferable to other river campaigns.

*Workshop*-River Network facilitates gatherings of river guardians statewide to develop strategic plans to protect specific rivers and collectively improve policies related to rivers.

*How to Save a River*-A comprehensive, masterfully written book covering the essentials of river saving. (Island Press, 1994)

## Building a Network... Opportunities for Partners to Contribute

### Networking-Sharing Information

Your knowledge and experiences are important to other river advocates. You can share with River Network materials or strategies that you've developed or discovered.

To make the river directory (DORIS) even more valuable, you can provide River Network with the names of helpful river experts to add to our current list of more than 500.

At your convenience, you can provide other river guardians working on similar issues with information and guidance that could help improve the work of both parties.

Participate and mobilize support for national, state or regional policies related to rivers through the network.

### Providing Feedback

We'd like your suggestions and assistance on how to make additions or improvements to the River Network Partnership to make the program work better for you and other river activists.

### Paying Annual Dues

*Organizational Partners*—Grassroots and state river groups. Dues are based on a sliding scale according to your organizational budget.

Budget	Annual Dues
<b>\$0-20,000</b>	<b>\$60</b>
\$20,001-\$100,000	\$100
\$100,001-\$200,000	<b>\$200</b>
> \$200,000	<b>\$300</b>

*Individual Partners*—Individuals committed to taking action or a leadership role to save a particular river stream or watershed. Dues: \$60.

*Sustaining Partners*—Individuals willing to provide financial support to help others save rivers. Minimum dues: \$100.

*Corporate Partners*—Corporations willing to sponsor grassroots river groups as partners. Minimum dues: \$100.

*Agency Partners*—Federal, state, or local agencies wanting to be tied into River Network by receiving our publications, invitations to meetings and workshops, etc. Minimum dues: \$100.

**We invite you to join the River Network Partnership  
to further your river-saving goals  
and to work collectively for America's rivers.**

**Yes, I'd like to become a RIVER NETWORK Partner.**

*Organizational Partner*  *Individual Partner*  *Sustaining Partner*  *Corporate Partner*  *Agency Partner*

Amount dues paid \$ \_\_\_\_\_

NAME \_\_\_\_\_

ORGANIZATION \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_ PHONE (\_\_\_\_) \_\_\_\_\_

*For more information contact:*

RIVER NETWORK, PO. BOX 8787, PORTLAND, OR 97207-8787 (503) 241-3506 • 1-800-423-6747

The mission of River Network is to help people save rivers. We support river conservationists in America at the grassroots, state and regional levels, help them build effective organizations, and link them together in a national movement to protect and restore America's rivers and watersheds. River Network also works with river conservationists to acquire and conserve riverlands that are critical for wildlife, fisheries, and recreation.

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**River Network**

P.O. Box 8787  
Portland, OR 97207

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