River Voices

# Using the Information Superhighway to Save Rivers

by Chuck Hoffman

Back in the days of ancient Greece, news traveled by word of mouth or by personal messenger. If the news was bad, sometimes the bearer fell victim—witness the messenger from Marathon.

News did not travel fast for a long time. People tried carrier pigeons, bottles, signal flags, flashing lamps, and ocean-going vessels strung horizon to horizon in efforts to move information quickly. Finally cable systems carrying electrical impulses enabled us to send text, graphics, animation, and sound with great speed to distant locations. Movement through these cables has grown faster and faster, and now the cables are not fast enough to support our consuming need for information, response and instant gratification. Wireless transfers and satellite communications move business data, telephone calls, teaching, and training all over the world within microseconds.

Not so in the river conservation world. We move data the old-fashioned way—by trade canoe. Glaciers move faster. Our motto is "Some of the data will get there—eventually". We are either cheap, poor, hard-headed or a combination of the three. Whatever it is, we are losing the race to capture the hearts and minds of Americans. The wise use movement is moving faster and more effectively using tactics we originally developed. Consider these conditions:

Symptom: The folks at River Network call our offices at River Federation about three times a year asking for an updated list of the managers of state river conservation programs. Each time we delay the response, because we know the list is already out of date. So we send faxes to the states to verify names, addresses, fax and telephone numbers, and email addresses. Then we call all the people who did not respond to the fax request, hoping that they still work there and the program is still funded. We update my list, print out the 50-state report, and fax it to Portland. Email would be faster, cheaper, and easier for all concerned, but only six state river managers presently have email addresses. How frequently have we stepped on this glue strip alternative to the information superhighway?

Symptom: We paid a visit this past December to a rancher in South Dakota with property on the banks of the Missouri River. We were explaining to him how the National Wild and Scenic River designation for his segment was a good thing for the river and those who have property along it. This gentleman is a conservationist in every sense of the word, and he was playing a leadership role on the county planning commission. He showed a pride in environmentally sensitive land management that few Americans do. In short, he is the kind of individual we believe we can
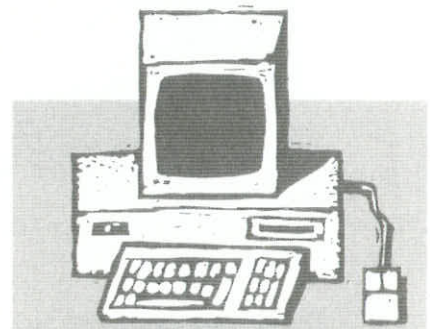
"...we are losing the race to capture the hearts and minds of Americans. The wise use movement is moving faster and more effectively using tactics we originally developed."

recruit as supporters for river conservation projects.

While sitting there, the fax rings twice with separate alerts sent out by Chuck Cushman of the National Inholders Association. It turns out that our host was quite suspicious of the wild and scenic effort and had turned to the Inholders Association as his source of information. How often have we found that the opposition is using techniques that we perfected faster and better than we do?

Symptom: Every movement has a fountain of information that sustains it, gives it credibility, and helps it grow. It can be a magazine, a central organization, a newspaper, a university, or an industrious group of individuals. All of them work hard to get the information flowing to the

River Voices

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.

From the President

Last weekend I found Kevin, my 1 1/2-year old, engaged with the mouse of my home computer. A message on the screen asked whether I was *sure* that I wanted to delete Microsoft Word.

© photo by Linda Kliewer

This told me that a new generation has arrived for whom electronic communications will be as much a way of life as the telephone has been for mine. The power of the computer can give real content to the term *river network* if we can get the hard- and software to those who need it most: grassroots activists.

Need it for what? Need it to obtain *specific information* that can help them protect their river or watershed. Need it to *communicate quickly* with their supporters and those whom they seek to influence. Need it to *produce the message and images* that have the power to change public opinion. Need it to *work together* with activists in other watersheds to influence policy.

Our task is to be strategic, to remember what we want telecommunications *for.* We want to give activists powerful tools for communicating with the public, policy-makers and allies. We don't want to drown them in a sea of information, messages and technical perplexes. The old term "appropriate technology" comes to mind: What tools are appropriate for a volunteer of modest means, limited time and a very specific mission?

This is the background of Chuck Hoffman, the principal contributor to this issue of *River Voices*. Chuck was a volunteer in many river campaigns, including the successful efforts to save the Red River Gorge in Kentucky and the Delaware River in the Northeast. He was a founder of American Rivers and of River Network and now directs the River Federation. Many thanks to Chuck for his assistance on this issue.

River Network has brought on some outstanding new Trustees in the last few months. *Tim Palmer* is the foremost author on river issues in the United States. *Wendy Wilson* is founder and Executive Director of Idaho Rivers United. *Gil Butler* is a kayaker, canoeist, and owner of Butler Capital Corporation in New York City. *Dan Valens* is an ace kayaker and veteran of river campaigns in Oregon. *Rebecca Wodder* is President of American Rivers, Inc.

These folks came on in time to help us produce our new Five-Year Plan, which will be finalized in September. Our thanks to all of the activists who contributed their insights to help us be more strategic in building a river and watershed movement in America.

Finally, I'm sorry to announce the impending departure of Pete Lavigne, director of our River Leadership Program for the last three-plus years. Pete has been our "road warrior," criss-crossing the country to lend a helping hand to fledgling state river councils and grassroots activists. Thanks largely to Pete, the roster of state river councils has grown from five to 20. Pete will be leaving us to find work in the arena of river and watershed policy, and to write a book on that subject. We'll be hiring a successor once Pete makes the shift.

Sincerely,

Phillip Wallin
President
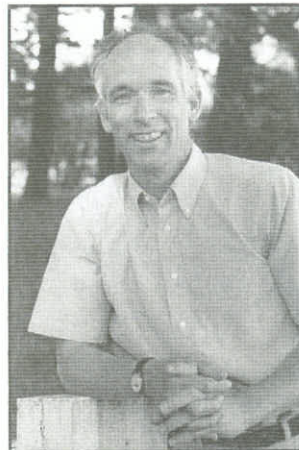
> We want to give activists powerful tools for communicating with the public, policy-makers and allies.

What is the Internet exactly?

When the military industrial complex of the 1950s and 1960s thought about how to communicate within itself, it decided to construct a vast computer network so researchers, agencies, corporations and universities could share information. It was called the ARPANET. It used high speed, dedicated telephone lines and powerful computers, items that could be purchased and programmed by universities, research centers, and defense agencies with the support and funding of the defense establishment. While defense information was securely stored, the basic communication link was wide open.

As more universities and corporations grew to understand the potential for this network, many more people began to use this toll-free highway to link to colleagues for other educational and business reasons. So was born the Internet (See "Online" on page 7 for more). ᕦ

members of the movement. Where is that central source in the rivers movement? Where do we turn to for information? The answer is that we do not have such a source, and that the movement cannot prosper without such a service.

The rivers movement is characterized best by its diffuse and decentralized nature. River politics, where every decision is local, often rejects information from elsewhere in preference to local wisdom, whether based on fact or not.

Efforts spring up almost spontaneously in one region or another, and it is not uncommon to find situations in which citizens working locally on individual river projects refuse to participate with statewide river coalition efforts. They want to prevent their local effort from becoming "tainted" by outsiders working on statewide efforts. We as rugged individualists often seem to have a built-in revulsion to coalition-building. Can we not find a way to work together?

Symptom: Our newsletters are published quarterly or less frequently, alerts seem too oriented toward fundraising, and everything slows to a crawl in the bulk mail system. Is there a canon of the rivers movement that prevents us from communicating quickly and effectively?

Symptom: Relatively few of us are doing research, and we have limited ways to distribute our findings. How many of us are sending new research and technical documents out to our networks? How do we get it there in ways that have an impact?

What a group! We want to be more effective, to have more weapons with which to do battle, but we seem insistent on pointing half of them at ourselves. We have formed a lot of groups to work on behalf of rivers, but we have spent precious little time working to enrich and substantiate the rivers movement.

The State of the Opposition

Chuck Cushman of the National Inholders Association had a mainframe computer in his house by the early 1980s. It managed a list of every inholder in the United States, nearly 2 million names at the time. His reach became immediate and effective virtually overnight. Most of the members of our groups were still learning how to operate bank ATM machines.

News reports have chronicled the Association's aggressive use of fax networks to generate massive outpourings of letters, postcards and faxes to Washington on numerous issues.

The ultraconservative Heritage Foundation is planning to open its Conservative Cyberspace Center online to keep its supporters absolutely current.

Wise use members haunt the Internet's environmental newsgroups, gopher databases, and home pages tracking every public movement made by the environmental and river conservation communities.

Our opponents recognized long before we did that the competitor who took the first step into the information age would have a big advantage over the other. They took the step, and it has enabled them to mobilize constituencies more effectively than us. We have been set back too frequently by the property rights movement. This is one of many reasons why we should institute a Rivers Online network (see chart on page 5).

The Solution

Diagnosis and Prescription: We in the river conservation and restoration world are a movement in need of an overhaul. This overhaul should concentrate on the three fundamental systems: ▶

The rivers movement is in need of an overhaul concentrating on three fundamental systems:
- ∿∿ defining the rivers message in a way the public can relate to and support,
- ∿∿ building and strengthening our constituency, and
- ∿∿ employing effective communication with ourselves, decision-makers and the public.

Rivers Online Network

Purpose: to create a powerful information infrastructure for the rivers movement that will improve the speed and effectiveness of communication with our constituents and colleagues and that will empower them with better information, interaction and technical support. Here's what the structure of the network might look like.

River Fax Network

Technology Support Center

Internet Services

River News Services

Technical Support Center

Research Center

River Fax Network

Basic System for Linking the Rivers Movement

- System to link our primary constituents and colleagues
- Model after the National Hydropower Reform Coalition
- Managed by one of the national groups
- Information overload controls
- We jointly agree on what to transmit

River News Services

Multi-Layered System for Tracking River News

- The latest river news—can be contributed by users
- Press releases
- Headlines on top—drill down to detail
- People on the move
- New publications

Technology Support Center

Hardware, Software, and Connectivity Assistance

- Fill the technology gaps—hardware, software and connectivity within our primary constituencies
- Provide river relevant technical support

Issues Still To Be Addressed

- System Security
- Management Committee
- Funding and Finance
- Cooperation and Partnership
- User Profile System
- Gatekeeping

Technical Support Center

Electronic Hands-On System for River-Related Advice and Guidance

- River-related help documents or guidelines that respond to "How Do I ..." questions
- A place to post river-related questions for response on the posting board or via email by river experts
- Message threads—the text of online discussions—on river related issues, just like help threads from software technical support forums
- Fast, efficient way to help river groups around the country

Internet Services

The Full Range of IInternet Capabilities

- Email and Directories
- Conferencing/Roundtables
- FTP, Telnet, Gopher, WAIS support
- Technical Support Center
- Research Center
- Shopping Mall
- River News Services
- River Conservation Directory
- Links to secondary online sources
- Membership, intern, and volunteerism info
- REI Grant info

River Research Center

Documents and Databases Online in Hypertext and WAIS Format

- River databases—NRI
- State river assessments
- How-To guides
- Glossaries and dictionaries
- Technical research documents—short form
- Bibliographies online

Using the Information Superhighway to Save Rivers

defining the rivers message in a way the public can relate to and support, building and strengthening our constituency, and employing effective communication with ourselves, decision-makers and the public.

We can begin to address these three critical tasks by establishing an effective communications system within the rivers movement that will allow

information to flow. This will work best in an electronic medium through creation of an online system. Call it the Rivers Online Network.

The Rivers Online Network would be a powerful information infrastructure for the rivers movement that improves the speed and effectiveness of communication with our constituencies and colleagues. It would empower them

with better information, interaction, and technical support. We believe it should cover river conservation, restoration (revitalization), and watershed conservation.

The network would have six basic components: a fax network, river news services, a technology support center, a river-related technical support center, the complete array of Internet services

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Some Pros and Cons of Electronic Communications
by Rita Haberman

As with any type of new communication, electronic media has its advantages and disadvantages:

Advantages

Fast delivery - You can send and retrieve information across the world in seconds. Action alerts are timely and responses can be easy. Retyping documents or mailing floppy disks is no longer necessary. Collaborating on projects and activities with others in remote locations becomes simpler.

Flexibility - It's possible to send and receive information at anytime and from virtually any location where phone lines are available. Telephone tag, interruptions and unnecessary meetings can be avoided. Working at home becomes a realistic option.

Cost effectiveness - Count on cost savings for long-distance phone calls, faxes, express mail, and travel. Also compared to video and television production, producing a World Wide Web site is relatively inexpensive.

Reach - It is estimated that some 30-40 million people use the Internet, and membership is growing rapidly.

Opportunity to expand constituency - The World Wide Web provides an opportunity to get our message and information out to people who might otherwise not see or hear it.

Save paper, printing and postage - Online media provides an alternative and a complement to printed materials.

Decentralization - The Internet is decentralized by design and philosophy. Nobody controls the Internet. Activists are free to use and develop whatever parts of the online network they feel they need.

Disadvantages

Access - It's the classic case of the haves and the have-nots. Computer systems and functional office systems are not cheap (see page 8). Monthly online service fees add up quickly too. Then there's the need for equipment upgrades. Good training takes both time and money.

Chaos/Information overload - Finding what information you want among the volumes of material you want to avoid can be difficult and frustrating. Extraneous information will continue to grow, as commercial use of the Internet is the fastest growing domain. Useful river-oriented information is rather sparse right now.

Presentation - Multimedia World Wide Web sites with fancy graphics,

photographs and sound are pleasing to visit, but much of the information online is text based with minimal formatting and can be difficult to read. In addition, large photographs and intricate artwork can take a long time to draw on your screen.

Learning process - Setting up your system may be more difficult than you anticipate. Undoubtedly, you'll encounter glitches and bugs. The "point and click" software is very user-friendly, but use of other services may require learning commands and trouble shooting. The tools to use the Internet, however, are getting more user-friendly by the month.

Inappropriate use - Once you're up to speed, online communication is so fast and efficient, it's easy to lose sight of the value and importance of personal contact over the phone or in person.

Preaching to the Choir - Through personal email and topical conferences, we can spend too much time talking with allies, rather than winning over the opposition.

Rapidly changing technology - Computer technology is changing so quickly, it's virtually impossible to keep up with it. It can be daunting to the novice and pro as well. ◄

(email, etc.), and a river research center. The chart on page 5 shows this system in detail.

The system would deliver information to river conservationists in several ways:

• a fax system would transmit hard copy documents;

• the technology support center would be working to obtain free or sharply discounted computer hardware and software to allow network participants to connect reliably and use the system effectively;

• Internet services would provide electronic mail, file transfer (uploads and downloads), and access to other river-related information;

• river news would be delivered in a list format for quick viewing, with the ability to click on individual items to obtain more detailed information; there may also be an electronic newsletter suitable for printing;

• a technical support forum for getting expert answers to river-related questions;

• a research library with search engine; it would be divided into sections such as directories on groups, agencies and individuals, river databases, technical documents, glossaries, and bibliographies.

Participants could upload news information, send messages to technical support, chat with other participants, do research, or be directed to other information sources. Users would be encouraged to help each other whenever possible.

Privacy Issues and Information Overload

Many people we talk to complain of information overload. That is usually a symptom of getting too much of the wrong kinds of information. Others are concerned about privacy, they do not want to be deluged with information that they did not request. (Another

privacy issue that must be addressed is eavesdroppers and hackers).

A user profile system can address both of these issues effectively. When first joining the system, the user would fill out an electronic form indicating what information they would like to receive and under what conditions. Following this guide, system managers filter out the information not fitting the profile. The user could update the profile at any time.

Who Wants to Participate?

This is our modest proposal. River Federation and River Network would like to pursue the Rivers Online Network if there is sufficient interest out there in the river conservation universe. But to do it, we need partners and participants who will show us their interest and demonstrate their commitment.

What information and services must be on our online network for you to regularly connect to it? Do you see major impediments? Are there special concerns we must address to do this job well? What can we do with this network to help you be more effective in saving your river?

With this information in hand, we can seek the funding, obtain the hardware and software for the network, and begin development. If you or your organization is interested in participating, please send us you name, agency/ organization/company name, title (if applicable), address, your primary voice telephone and fax, and your email address if you have it. 🐟

Chuck Hoffman is the executive director of the River Federation. His first experience with personal computers was with the Kaypro 4 he purchased for American Rivers in 1983 to write a book about state river conservation programs. The computer is long gone, but the book survives on disk.

Online

What does online mean, how do we do it, and what does it get us? Online systems are methods to transmit information electronically. In the strict sense, the telephone is an online system just as the fax machine is. In popular jargon, however, online systems connect powerful computers around the region, the country or the world into one big network. We can use these computers to:

• Send messages to one another (email);
• Review information about specific subjects posted to specific boards (the usenet which houses newsgroups);
• Connect to remote computers, interact and even operate them (telnet);
• Download files housed on remote computers (ftp, or file transfer protocol);
• Visit places on the Internet that, upon entry, seem similar to visiting the counter at a local shop (the World Wide Web).

With appropriate software, the Internet surfer can read and download text, sounds (such as music or speeches), graphics (logos and photographs), and animations (cartoons and film clips). This is just the beginning. With online services, one can read the news, conduct research, send faxes and letters, and much more. 🐟

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Getting the Most Value for Your Money

Three computer systems that will serve your organization well

by Chuck Hoffman and Pete Monaghan

A budget is the first item in hand when most nonprofit organizations and businesses go shopping for computer equipment. We decided to go shopping with three different budgets in mind—one for a general business workstation, one that was also suitable for desktop publishing, and one that would outfit a three station office. We found you can get a lot for your money if you shop carefully.

We settled on three budget levels—$2,500, $4,500, and $10,000. We included everything a new station would require to operate except the furniture, and we did not assume that anything would be donated or discounted especially for nonprofit organizations. We also made several other determinations that governed the purchase of the systems. (See the sidebar on buying advice on page 9.)

We did decide to purchase main-stream business applications, in our case, we chose a suite of applications known as Microsoft Office Professional which includes a word processor (Word 6.0), spreadsheet (Excel 5.0), presentation graphics (Powerpoint 4.0), database (Access 2.0), and scheduler (Schedule +). We also included a computer faxing package called Delrina WinFax Pro, and online service package from America Online. Each of these packages are the best or among the best in its class. They were selected because they are known to work well together.

Microsoft Windows 95 will be shipping by the time you read this article, and it will bring some changes to the above list. Office Professional will be called Microsoft Office Professional 95, and all the applications will be updated to work with the new Windows. Each will bear the version number 7.0. WinFax will receive a major overhaul to take advantage of Windows 95's new integrated telephone capabilities. America Online will be shipping version 2.5 with full and totally integrated Internet support.

We decided to purchase from a mail order vendor so that the same system would be available everywhere in the country at the same price. When selecting the vendor, we kept several things in mind. Most of the best mail order vendors offer a variety of pre-built machines that offer little need for customization. In fact, to keep prices low, they plan not to customize. But the systems they do offer are excellent. Reputable vendors include Gateway, Dell, Zeos, Micron, and others. A few vendors like Insight Direct will still custom build a machine with virtually any component you need and do it at competitive prices.

Virtually all of the major mail order vendors offer excellent technical support, guarantee and warranties, and may offer an onsite tech support package. These systems use standard components that are available from any supplier, leaving less risk of being held captive by exotic parts.

We decided to purchase all three systems from Gateway 2000, a reputable company known for making a quality computer. The reason we chose Gateway over the others is that the company is presently bundling Microsoft Office Pro with the system at an attractive price.

The Office Workstation

The first system we decided upon was the basic business workstation. We based the workstation on an Intel 486DX2-66 Mhz (megahertz, or thousands of cycles per second) processor with 16 Mb (megabytes) of memory. Many office systems come standard with 8 Mb of system memory, but 16 Mb will improve performance between 25% and 42% and will extend the useful life of the system.

The system features a huge 1 gigabyte (1,000 megabytes) hard disk drive from Western Digital. The expansion bus (the slots in the system board where video and disk controllers, modems and network cards are inserted) is based on the PCI interface. Using PCI cards will allow for movement to Pentium systems which are based on the PCI expansion bus.

The system uses a modest 14 inch Super VGA monitor and a reasonably powerful 64 bit graphics controller, the Powergraph from STB Systems. The system comes with the Microsoft Mouse (highly recommended since cheap pointers go bad quickly), a standard keyboard, all necessary cables, and installation and startup guides.

The standard system software includes the MS-DOS 6.22 operating system, Microsoft Windows 3.11, driver disks for the CD-ROM drive, the video board, the mouse, and the hard disk drive, and Microsoft Office Professional version 4.3. All of these will arrive pre-installed.

We chose the Hewlett Packard Deskjet 540 inkjet printer with 300 dots per inch resolution operating at 3 pages per minute. We added a Cardinal Technologies faxmodem rated at a transfer speed of 28,800 bits of audio (baud rate) per second for both fax and modem use. It comes with basic software, but we are substituting America OnLine or Econet, both of which are free, for Internet access, and WinFax Pro 4.0 for fax usage.

This system is fast and built with quality components. *Continued on page 11*

$BUYING ADVICE$

Tips that Will Save You Hundreds of Dollars and Help You to Avoid Disaster

by Chuck Hoffman and Pete Monaghan

Buying computers is a perilous business. Lots of money is on the line, and you must live with your choices for years. When people ask us about purchasing new systems, we always offer this advice:

• Caveat emptor always applies. Let the buyer beware. An informed buyer is the best buyer.

• We recommend not buying from discount stores or from many of the computer superstores. Discount stores have all-in-one packages at seemingly attractive prices, but these systems are hard to upgrade, there usually is no in-store service that you can rely upon, you cannot rely on the sales personnel to know computer systems, and they tend to sell systems from vendors with particularly bad repair problems.

• Salespeople at computer superstores often don't know what they are doing, although a few of them may be very competent. Most stores tend to sell you what they have pre-boxed, and the components of the house brands tend to be of lower quality. Mail order vendors will sell a higher quality system with better integrated components.

• Reputable mail order vendors use higher quality components in order to minimize merchandise returns and technical support calls. Most of these vendors have telephone sales consultants who have advised buyers on hundreds or thousands of purchases.

• The dollar-wise decision is not to buy the system with the slowest processor. These are usually the oldest technology. We think it makes more sense to buy the second or third fastest system. This is current technology, but not at the bleeding edge where prices are at premium levels.

• Do not expect a lot from so-called multimedia packages that come with lots of disks at no additional charge. There is no additional charge because the disks have little or no street value. If you can use one of the programs on disk, you get a bonus. Otherwise, expect to pay for software.

• We strongly recommend owning legal versions of the software you use. Using bootlegged copies from other users violates license restrictions and is illegal. Having a legal version also enables you to obtain manuals, technical support, and less expensive upgrades to the software.

• Technical support from vendors can be expensive, but you can minimize your cost by using the technical support centers on online services such as Compuserve. More than 700 hardware and software vendors have support centers on this service. They provide answers to technical questions, both from support staff and from other users, driver updates, bug fixes, program information, and advice.

• Mail order vendors increasingly are offering software bundling options with their computer systems. We selected the Gateway systems for cost comparison because they came bundled with Microsoft Office Professional, software that costs nearly $600 when purchased separately. The bundle allows you to purchase high-quality software and substantially discounted prices.

• Hard disk prices are dropping rapidly. January 1994 prices were running about $1 per megabyte of storage (For instance, a 340 Mb drive would cost about $340). Today prices have dropped to under 40 cents per megabyte, so that same $340 will buy a 1080 Mb drive. With prices low, we advise buying high capacity drives to give your system as much defense against obsolescence as possible.

• When purchasing computer memory (RAM), be sure that the type of components used gives you an upgrade path. Many 486 PC systems come with eight slots for memory cards known as SIMMs. If you purchase a system with 8 megabytes of memory, the vendor may try to install eight 1 Mb SIMMs in your system. To add memory later, you would have to dump some of those cards (about $50 each) to provide room for higher capacity chips. You can save $200-$400 down the road by having the vendor install higher capacity SIMMs now (for instance two 4 Mb SIMMs). You will also stave off early obsolescence.

• When possible handle your purchase via credit card. This reduces processing time and gives you more rights and cancellation opportunities if there are problems. ◄

A comparison of three different computer systems

	Office Workstation	Price	Publishing Workstation	Price	Server/Workstation	Price
Vendor	Gateway 2000		Gateway 2000		Gateway 2000	
Processor	Intel 486DX2-66 Mhz	$1,499.00	Intel 486DX2-66 Mhz	$1,499.00	Intel Pentium 90 Mhz	$2,199.00
System Board Maker	Intel		Intel		Intel	
BIOS	American Megatrends		American Megatrends		American Megatrends	
Expansion Bus	PCI-Bus		PCI-Bus		PCI-Bus	
Memory	16 Mb RAM	360.00	16 Mb RAM	360.00	16 Mb FPM RAM	360.00
Hard disk capacity	1 Gigabyte, 10ms,		1 Gigabyte, 10ms,		1 Gigabyte, 10ms,	
	Western Digital EIDE		Western Digital EIDE		Western Digital EIDE	
CD-ROM drive	Mitsumi Quad Speed		Mitsumi Quad Speed		Mitsumi Quad Speed	
Floppy disk drive	1.44 Mb, 3.5 inch		1.44 Mb, 3.5 inch		1.44 Mb, 3.5 inch	
Video Card	STB Pwergraph 64		ATI GX Mach 64	150.00	STB Systems with	
	with 1 Mb RAM		2Mb RAM		1 Mb RAM	
Monitor	Crystal Scan 14 in		Vivtron 17 in flat screen,		Vivitron 15 in. flat screen,	
	1024x768 NI		1280x1024 NI	275.00	1024x768NI	
Keyboard	101 key		101 key		101 key	
Mouse	MS Mouse 2.0		M S Mouse 2.0		MS Mouse 2.0	
Tape Backup System					CMS Jumbo 1.3 Gig Tape	
					Backup System	199.00
Faxmodem	Cardinal Technology	149.00	Cardinal Technology	149.00	Cardinal Technology	149.00
	V.34 28.8/14.4 Int.		V.34 28.8/14.4 Int.		V.34 28.8/14.4 Int.	
Power Supply	145W		145W		145W	
Case type	Desktop		Desktop		Desktop	
Free drive bays	4		4		4	
Software included	MS-DOS 6.22		MS-DOS 6.22		MS-DOS 6.22	
	Windows 3.11		MS Windows 3.11		MS Windows 3.11	
	MS Office Pro 4.3		MS Office Pro 4.3		MS Office Pro 4.3	
	MS Bookshelf 95		MS Bookshelf 95		MS Bookshelf 95	
Shipping		95.00		95.00		95.00
Total package price		$2,103.00		$2,528.00		$3,002.00
					3 System Package	$7,633.00
Printer	Hewlett Packard	299.00	Hewlett Packard 5 MP	999.00	Hewlett Packard 5 MP	999.00
	Deskjet 540		Laserjet w Postscript2		Laserjet w Postscript2	
Fax Software	WinFax Pro 4.0	59.95	WinFax Pro 4.0	59.95	WinFax Pro 4.0 (3)	179.85
Internet Software	America OnLine	N/C	America OnLine	N/C	America OnLine	N/C
Publishing Software			Aldus Pagemaker 5-CD	489.00	Aldus Pagemaker 5-CD	489.00
Illustration Software			Corel Draw 5.0-CD	409.00	Corel Draw 5.0-CD	409.00
Network system					Lantastic 6.0	358.00
					3 stations, coax wire	
					Noderunner SI 2000C	
					adaptors*	
Software/printer		25.00		25.00		45.00
					3 System Add-ons	2,435.30
Total System Price	1 Workstation	$2,486.95	1 Publishing Workstation	$4,499.95	Network w 1 workstation	$10,068.85
					1 publishing workstation	
					1 server/workstation	

* Networks with more than three stations should use 10BaseT cabling and a hub/concentrator. This will add about $149 for the hub, and about $125 for extra wiring supplies.

It is expandable and should provide five years of quality service. We list a total package price delivered to your door of $2,486.95.

The Office Workstation with Desktop Publishing Capability

This system is the office workstation already described with several enhancements added to allow for professional quality electronic publishing. We elected to build our publishing workstation around Adobe Pagemaker 5.0. This is an excellent general purpose publishing program that supports Microsoft products well and is known to print shops and typographic service bureaus around the country.

We added to this Corel Draw 5.0, the most popular general graphics program on the market. It includes an illustration program, a paint and photo finishing program, presentation graphics, animation, a graphics scrapbook manager, a type management and design system, a tracing program, a font management program, another publishing program (Corel Ventura), a database publisher, 820 fonts, and more than 18,000 pieces of clip art. Draw can import and export to almost any format.

Working in concert with Microsoft Word and Powerpoint, Corel Draw and Pagemaker provide a complete publishing solution.

By the way, purchasing Corel Draw and Pagemaker on CD, rather than on disk, saves enough money to pay for the Mitsumi CD-ROM drive included in the system package.

We also upgraded three pieces of system hardware for this publishing station. First, we upgraded the video card to an ATI GX Mach 64 with 2 Mb of RAM to provide screamingly fast graphics generation. Second, we

upgraded the monitor to a Gateway Vivitron 17 inch model with a maximum resolution of 1,280x1,024, enough resolution and screen size to usefully work with two facing pages on screen at once.

Third, we upgraded the printer to a Hewlett Packard Laserjet 5MP. This printer operates at six pages per minute at a resolution of 600 dots per inch, four times the resolution of earlier laser printers. It also has Adobe Postscript Level 2, an advanced system for describing and printing text and graphics. Postscript is the standard page description language of the publishing industry.

This system is professional quality. It has excellent speed and graphics quality, superb software, and an attractive price. If it is missing anything, it would be a removable disk drive, such as a Syquest or the new Iomega Zip Drive, for copying huge graphics files to disk for transfer to a printer or service bureau.

The Small Office Network

An office computer network can be useful if there are two or more machines operating in the office, and if there is a need to share resources. Resources might be data, printers, or software that serves groups of people working together.

For our system we are choosing Artisoft Lantastic 6.0 for Windows as our networking hardware and software. Our network will allow the office workers to share one printer, data (particularly information such as the membership database), group messaging and scheduling, They may find other programs, files or hardware to share in the future, for instance, to allow connection to the network via modem from a remote location.

Our network connects three computer systems: the office workstation and publishing workstation

already described, and another office workstation that will also be the server to the network. A server is a computer that shares some or all of its resources with other computers on the network.

The server workstation is an upgraded version of the office workstation already described. It uses an Intel 90 Mhz Pentium processor instead of a 486DX2-66 for faster and more powerful processing. It also has a network tape backup system, the Jumbo 1.3 gigabyte device from Colorado Memory Systems. This is large enough for one tape to back up a single hard disk drive on the network in its entirety. Backup software for Windows and DOS is included with the tape drive.

The network components are the Lantastic 6.0 software for Windows and DOS, network interface cards (NICs) from Artisoft called the Noderunner 2000C SI cards, and coaxial cables (much like but not identical to cable television cable) to connect the computers. The Lantastic software includes everything necessary to share computer resources, to run group scheduling, and to handle internal email between the three systems. No other special software is necessary.

The delivered price on the server workstation is $3,002. The network would still use the Hewlett Packard Laserjet 5MP printer, the publishing workstation would still use Corel Draw and Pagemaker, and each system would include WinFax Pro, and Internet software. Including the $358 cost for the networking hardware and software, the total delivered price for the three station network is $10,068.85. ✐

Pete Monaghan is a computer support specialist with a health insurance provider in Maryland. He donates computer services to the River Federation.

The AWA Home Page

A great example of using the Internet effectively
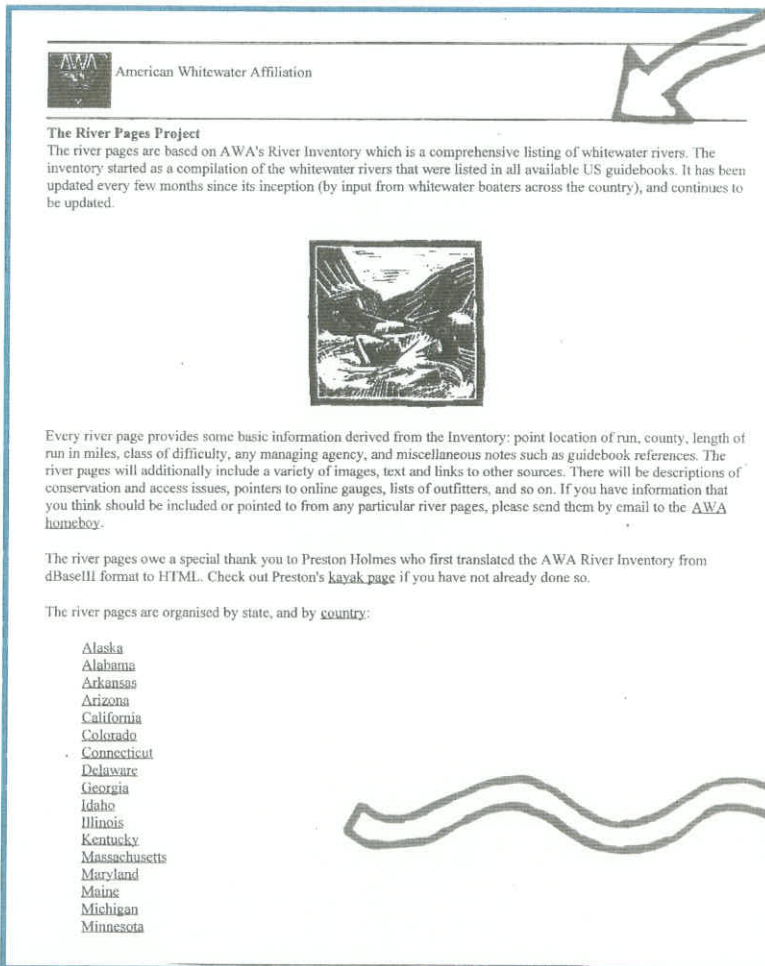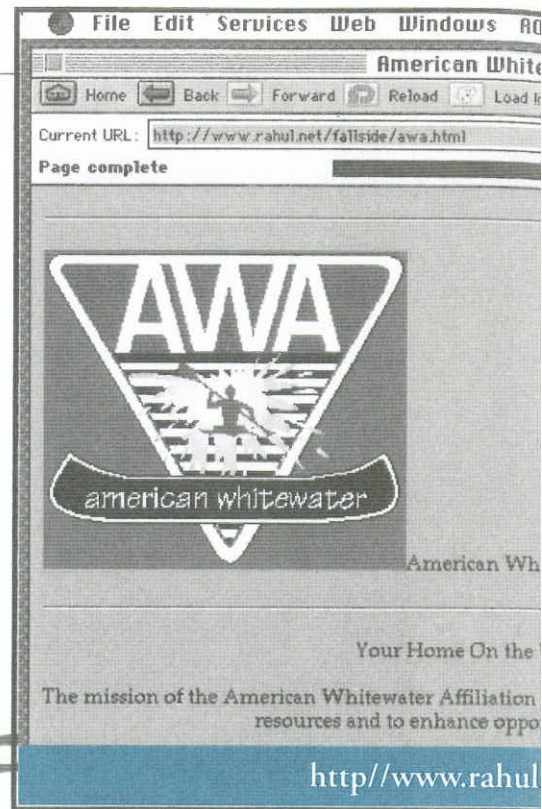
by Chuck Hoffman

The American Whitewater Affiliation has one of the finest home pages on the World Wide Web. It offers complete access to available AWA resources including a directory for their people, programs, and committees, membership information, access to back issues of the journal, the AWA safety code, and a listing of races, rodeos, and festivals.

Program information includes river news, progress on the river access program, the whitewater river inventory, and a home page devoted to reports of first descents on whitewater streams.

A visitor can also fill out and send a membership form or purchase current or back issues of the journal. One can also find telephone numbers to check out local river conditions, essential information for any serious paddler.
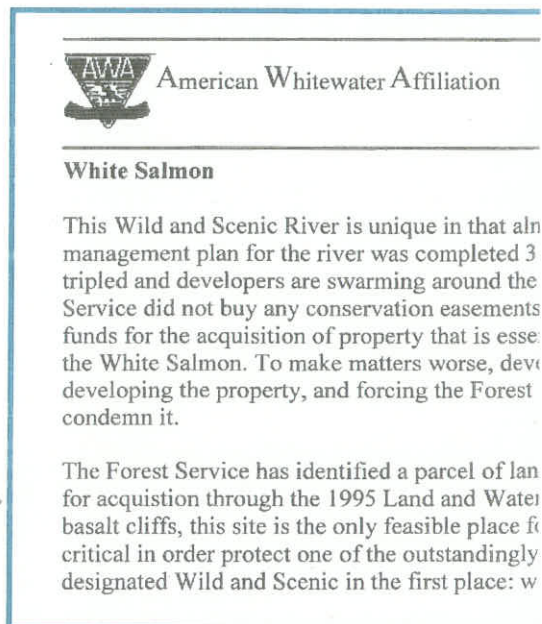
A Strong Beginning

The AWA site starts strong with a powerful issue orientation. The AWA logo pops up first followed by the short text of its mission

(browser window screenshot)

File Edit Services Web Windows AC

American Whitewater

Home Back Forward Reload Load

Current URL: http://www.rahul.net/fallside/awa.html

Page complete

American Wh

Your Home On the

The mission of the American Whitewater Affiliation
resources and to enhance oppo

http//www.rahul

statement. One immediately has a clear idea what t
statement is a photo of a street sign saying "dead en
about dwindling river access. Past this, there is a let
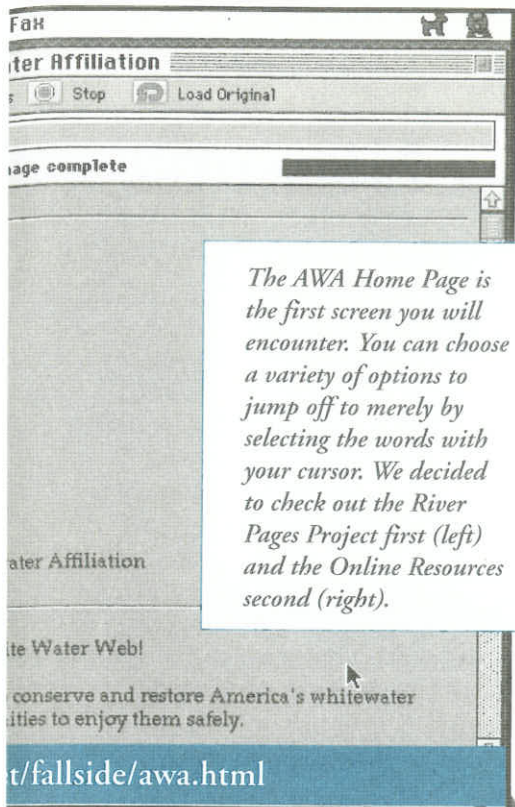an issue important to whitewater paddlers.

The page then uses the characteristic World W
other information available on succeeding AWA pa

Another feature that will help this web site to l
Paddling organizations from around the country ca
thus linking local membership needs with an effect

(screenshot)

American Whitewater Affiliation

The River Pages Project

The river pages are based on AWA's River Inventory which is a comprehensive listing of whitewater rivers. The inventory started as a compilation of the whitewater rivers that were listed in all available US guidebooks. It has been updated every few months since its inception (by input from whitewater boaters across the country), and continues to be updated.

Every river page provides some basic information derived from the Inventory: point location of run, county, length of run in miles, class of difficulty, any managing agency, and miscellaneous notes such as guidebook references. The river pages will additionally include a variety of images, text and links to other sources. There will be descriptions of conservation and access issues, pointers to online gauges, lists of outfitters, and so on. If you have information that you think should be included or pointed to from any particular river pages, please send them by email to the AWA homeboy.

The river pages owe a special thank you to Preston Holmes who first translated the AWA River Inventory from dBaseIII format to HTML. Check out Preston's kayak page if you have not already done so.

The river pages are organised by state, and by country:

Alaska
Alabama
Arkansas
Arizona
California
Colorado
Connecticut
Delaware
Georgia
Idaho
Illinois
Kentucky
Massachusetts
Maryland
Maine
Michigan
Minnesota

The River Pages Project: by clicking on a state and then a river you can pull up stats and updates on hundreds of waterways nationwide.

(screenshot)

American Whitewater Affiliation

White Salmon

This Wild and Scenic River is unique in that aln
management plan for the river was completed 3
tripled and developers are swarming around the
Service did not buy any conservation easements
funds for the acquisition of property that is esse
the White Salmon. To make matters worse, deve
developing the property, and forcing the Forest
condemn it.

The Forest Service has identified a parcel of lan
for acquisition through the 1995 Land and Water
basalt cliffs, this site is the only feasible place f
critical in order protect one of the outstandingly
designated Wild and Scenic in the first place: w

Extensive information on the White Salmon river ap

The AWA Home Page is the first screen you will encounter. You can choose a variety of options to jump off to merely by selecting the words with your cursor. We decided to check out the River Pages Project first (left) and the Online Resources second (right).

ater Affiliation

te Water Web!

conserve and restore America's whitewater
ities to enjoy them safely.

t/fallside/awa.html

site is about. Following the mission
a commentary on the group's concern
printed asking for letters to be written on

Web (WWW) format to present resources and

opular with paddlers is the AWA river pages site.
se this site to locate their own home page on the net,
national network of information and resources.

all of the land is privately owned. The
rs ago. Since that time, property values have
a like angry bees. Unfortunately, the US Forest
en land values were low, and now have limited
l to the integrity of the Wild and Scenic nature of
ers are buying up critical properties, threatening
vice to either buy the property at top dollar or to

the watershed (at BZ corners) as a top priority
nservation Fund (LWCF). Because of the steep
ublic access to the river. Buying this property is
narkable resources for which this river was
water boating!

rs after choosing it from the River Pages Project.

Why This Web Site Works

AWA Board member Pope Barrow reports that the site received more than 500 visits from Web surfers its first day of operation. Pope is one of three people in AWA sitting on a committee that manages this web site, the other two being a board member who works for a high tech company and a member who likewise works for a Silicon Valley firm and volunteers his time and expertise in building the web site. This committee reflects a combination of issue orientation and technological expertise that is so important to an effective web site. It has also kept development costs extremely low.

Web sites need to be fully interactive and current. If they are not, net surfers will not visit regularly nor will members of the interest group the site ostensibly serves. So many issue sites on the Internet seem to be places where organizations dump position papers, old speeches, and the occasional press release. The AWA site offers a home to their paddling group members, news of interest to the group, and a great combination of recreation and conservation/river access information.

Visiting the AWA Home Page

There are two ways to visit the AWA Home Page. One is to type in the URL (Uniform Resource Locator) for the system. This is the document name and location for any resource accessible via the World Wide Web. The AWA URL is: http//www.rahul.net/fallside/awa.html

The other is to use a search utility such as Web Crawler, Lycos, InfoSeek, Yahoo, or GNN Find and type in the keyword "american whitewater affiliation". The AWA home page should show up on the list. Clicking on it will take you there. Once there, use your copy command to copy the URL for the page and paste it into your "Bookmark", "Hot List" or "Favorite Place list". In the future, all you will have to do to visit AWA is to click on this name and address. ➤

After choosing Online Resources, we decided to go to Whitewater River Conservation and Access.

AWA   American Whitewater Affiliation

Online Resources

This page lists online and additional resources that may be useful for whitewater paddlers. Please send additions and corrections to the AWA Homeboy using the link at the bottom of this page.

Resources on the Internet
        Clubs and Organizations, AWA Affiliates
        Other Clubs and Organizations

AWA   American Whitewater Affiliation

Whitewater
River Conservation & Access

AWA actively pursues the conservation of whitewater rivers and the provision of access to those rivers. To help inform people about conservation issues, we have prepared a Whitewater & Hydropower FAQ, and AWA's position on river access is outlined in the Access Policy.

AWA's conservation and access related activities are numerous, and they are reported in regular Conservation and Access updates. In addition, there is an overview of AWA's Program for River Access. Updates will be available through a historical index that will be implemented in the future. If you are interested in conservation and/or access issues for particular rivers, try the River Pages.

The Futaleaufu River in Chile is seriously endangered by a proposed hydro project, for more information see the Fu web pages. The Fu was also identified in the AWA Top 40 list.

During 1994, AWA identified the most critical river issues facing our rivers, they are described in the Top 40.

AWA Whitewater Online, 11 April 1995.
Send comments about AWA pages to the AWA HomeBoy

Online with the Right-to-Know Network

Access data that could be critical to your case

by Jennifer Overman

RTK NET, the Right-to-Know Network is an online computer telecommunications system which provides access to the latest national environmental and socioeconomic databases. RTK NET is a free service which is operated by OMB Watch and the Unison Institute, two nonprofit organizations located in Washington, D.C. OMB Watch is a public interest group that advocates for the public's right-to-know and greater government accountability. Unison Institute is a center for computer systems and software technology in the public interest.

In the beginning RTK NET was created in 1989 in support of the Emergency Planning and Community Right-to-Know Act (EPCRA) which mandated the creation of the Toxic Release Inventory (TRI) and required that the TRI be made accessible through computer telecommunications. With support from various federal agencies and foundations, RTK NET has grown into a vital service linking information that previously was not available to the public and facilitating communications between community groups through mail transfers and online conferences.

The first group of users on RTK NET consisted of 200 activists from around the country who had fought long and hard for the passage of EPCRA. This user base has grown to 2,500 accounts, including users from business and government, as well as public interest groups.

What is available online?

Currently available on RTK NET are 14 national environmental databases covering toxic releases, water permits, permit violations, population statistics, and other related topics. These databases are provided with "user friendly" interactive search and retrieval menus so that users can target exactly the information they want to retrieve. These search tools vary in complexity to satisfy both novices and experienced researchers.

The specific databases now available on RTK NET include:
• BRS (EPA RCRA Biennial Reporting System) 1989 -1991
• Census Zip Codes (1990 U.S. Summary with TRI,FINDS, BRS)
• CERCLIS (EPA CERCLA "Superfund": Information System)
• CUS (TSCA Inventory of Chemical Production Database) 1990
• DOCKET (EPA Civil Litigation)
• EARNS (EPA Emergency Response Notification System) 1987 - 1992
• FINDS (EPA Facility Index System)
• NPL (EPA Superfund National Priority List of Sites)
• RODS EPA Superfund Records of Decision)
• PCS (EPA Water Permit Compliance System)
• USGS Water Use Database
• ROADMAPS (Health Information regarding TRI Chemicals)

All environmental databases on RTK NET are integrated into one "virtual database" so a user can cross-link any files. Additionally, a special report called the "Master Standard Report" enables a user to search across all the databases simultaneously and obtain a profile for a specific city or other location.

For activists focused on water issues the most interesting databases on RTK NET are most likely to be TRI, PCS, and FINDS. The TRI provides information about releases of toxic chemicals from manufacturing facilities into the environment. A facility must file an annual TRI report if it:
• Conducts manufacturing operations within Standard Industrial Classifica-

tion (SIC) codes 20 through 39;
• Has 10 or more full-time employees; and
• Manufactures or processes more than 25,000 pounds or used more than 10,000 pounds of any listed chemical during the calendar year.

Examples of the type of information which is reported by facilities include: amounts of each listed chemical released to the environment by media (air, water, land, or underground injection); amount of each chemical recycled, burned for energy recovery, or treated at the facility; source reduction activities undertaken to prevent pollution and waste generation; and general facility information including the name and phone number of a contact person at the facility.

PCS is EPA's Water Permit Compliance System database, which EPA uses to keep track of NPDES surface water permits issued under the Clean Water Act. PCS can be accessed four ways on RTK NET. A Standard Report allows searches based on a facility, geographic area, or by violation. The Form Query program permits a search on any PCS Facility field and retrieves forms which match the criteria in the fields specified. Two other search tools, Easy Report Writer (IQ) and SQL, allow users to create their own search based on the field codes and tables and are geared for the more advanced user.

EPA's Facility Index System (FINDS) is a computerized inventory of facilities regulated by EPA. FINDS contains two sets of information about each facility:

Facility identification data—such as its unique ID number, name, and physical address; and

"Pointers" to other sources of information - that is, other EPA programs and their databases which contain more

detailed information about the facility, such as the Office of Water's Permit compliance System (PCS).

With this type of information, FINDS may directly or indirectly answer questions such as: What is the facility's current address? How many facilities are regulated under the NPDES program? FINDS is an important tool for integrating data in support of building enforcement cases, targeting joint program inspections, responding to public requests for information, and helping to solve other environmental issues.

Landview II, a desktop mapping program created by EPA and the Department of Commerce is going to be available online. Described as a "geographic reference tool", Landview II permits mapping of geographic areas while displaying EPA-regulated sites, demographic and economic informationfrom the 1990 census, and key geographic features of the United States.

In addition, activists may also be interested in the Home Mortgage Disclosure Act (HMDA) data and the American Housing Survey (AHS) which provide community groups with information regarding the lending practices of banks, and a database on congressional campaign contributions developed by The Center for Responsive Politics.

How can RTK help activists?

In the fight to clean up the Mississippi River, groups like the North Baton Rouge Environmental Association, lead by Florence Robinson, have been using RTK NET to access data and communicate with other activists in their fight to demonstrate environmental racism in Cancer Alley. Florence has testified before the Civil Rights

Upper Mississippi River: Number of NPDES permits by type of facility

Type of Facility	NPDES Permit Code	Numer of Facilities
Pulp Mills	1	2611
Paperboard Mills	1	2631
Plastic Materials and Resins	1	2821
Adhesives and Sealants	1	2891
Petroleum Refining	2	2911
Blast Furnaces and Steel Mills	1	3312
Gray Iron Foundries	1	3321
Copper Rolling and Drawing	1	3351
Fabricated Metal Products	1	3499
Electrical Services	6	4911
Sewerage Systems	12	4952

Citizens for a Better Environment (Minneapolis office) has tapped into RTK Net to assist in the development of a comprehensive assessment of pollution sources in the Upper Mississippi River, with an emphasis on Toxic Release Inventory dischargers and NPDES permits. RTK Net staff helped CBE staff develop their queries and get the information they needed. The report above, number of NPDES permits for direct discharges into the river by type of facility, is just one example of the reports RTK Net provided to help CBE characterize the state of the Upper Mississippi.

Commission and used TRI data to support her concerns.

Groups like the Clean Water Network have begun to communicate with their members through a private conference. Internet "listservs," (automated group e-mail), are now being utilized to send e-mail on issues of concern. The Mississippi River Basin Alliance will be starting a listserv this fall whereby all their members are linked via e-mail. Citizens for Sensible Safeguards, a coalition of 230 organizations fighting the Contract with America, is currently running a listserv on RTK NET.

How do I get Online?

RTK NET can be accessed either by modem or through the Internet. A user can connect by modem by dialing (202) 234-8570, parameters 8, n, 1,

with speeds up to 28,800, V.34. New users can login as the account "public" with no password and register for their own private account. (Please note, an account is necessary to search the databases, although most text files are accessible by the "public" account). Internet users can connect via Telnet, HTTP (WWW) or Gopher to "rtk.net". A limited number of toll-free "800" telephone number accounts are available for modem connection for groups "in need". RTK NET staff are available to provide technical support, training, and research assistance. For more information about services which RTK NET can provide contact: admin@rtk.net or call (202)234-8494. ◄

Jennifer Overman is an environmental policy analyst, formerly with the Unison Institute.

Does The Net Work?

by Andy Alm

Networking itself isn't an answer. The net only works if it catches fish, and the fish in this case are effective strategies for improving water quality and aquatic resources (including habitat for real fish). The net works if it empowers all involved with water issues to be more effective in improving water quality and if it empowers local communities to be active participants in public policy making.

If communication gives us more information, it is useful...if the information itself is useful. Too much information is not a good thing. Likewise, contact with a broader network of people working to restore and protect watersheds and aquatic habitats can provide inspiration, new ideas, teamwork to accomplish tasks too big for any one group or individual, and a sense of community— even a global community—that provides moral support and encouragement.

But too much interaction, like too much of anything no matter how good, is not a good thing. We can find ourselves swamped with reading and writing, ear glued to the telephone, eyes glazed from staring too long at a computer screen.

What we need to share

Activists, students, citizen water monitors, teachers, scientists, regulators and others involved in watershed work need to share what they learn—with their communities, with responsible agencies and research institutions, and with each other. We need to share not only data, but our human experiences, our successes and failures, and the social contexts that affect our environments.

We need to understand that there are many paths to the goal of living as a human race within the planet's ecology, and we need to learn to understand, in our hearts as well as in our minds, that in the diversity of our efforts is great strength and hope.

How to communicate

We need to follow a couple of rules in approaching communication. First, no single communication medium is better than the others, and each is more effective when integrated with the others. Second, the most potent communication is that which empowers all participants as active contributors and learners rather than as passive receivers. Thus communication which engenders critical thinking, encourages imagination, and stimulates action is more powerful than that which simply informs or entertains. A group discussion is more potent than a lecture.

Computer networks, global dialogs

A global dialog can help remove the social and structural barriers to progress, and is essential if we are to resolve problems that are global in their magnitude, such as the degradation and destruction of the earth's aquatic ecosystems. It is the vision of globally empowering, interactive communications—via computer networks—that has caused the Internet to grow exponentially, now with millions of participants around the planet.

Direct communication between groups and individuals via computer networks can reduce the bottlenecks and filters that limit information flow. Editors, those much beloved and maligned gatekeepers of (and sometimes barriers to) mass communications, will become in this new vision the facilitators, distilling the river of information that they touch, but not muddying it or diverting or impeding its flow. More and more of us will be editors, for better or for worse.

Computer networks and community watershed education

How can computer networks benefit efforts to raise public awareness of watersheds and increase effective public involvement? They can open new possibilities for collaboration, for access to human and information resources, for sharing human experience across what once were rigid barriers of gender, culture, geography and wealth. They can help to highlight our similarities, rather than our differences: "Water are we."

Computer networks must not be superhighways accessible to some and bypassing others; they need to be more like the clouds, the rain, the rivers and the seas: accepting and recirculating information, allowing all to drink and to ride the currents, then moving on.

Computer bulletin boards, such as the EPA's Non-Point Source Bulletin Board, and computer systems accessible via the global Internet, such as EcoNet, EELink, EnviroLink and many others, provide forums for information-sharing and community-building among volunteer monitoring groups. The Global Rivers Environmental Education Network (GREEN) and EcoNet together are experimenting

They can open new possibilities for collaboration, for access to human and information resources, for sharing human experience across what once were rigid barriers of gender, culture, geography and wealth.

The Hydropower Reform Coalition's Fax Network

by Chuck Hoffman

with how these networks can be used to cross-link a diverse array of groups that share the goal of community watershed education and steward-ship. Via the World Wide Web or Gopher, start by connecting with GREEN at <http://www.econet.apc.org/green>or <gopher://gopher.econet.apc.org:70/11/orgs/green> — and find pointers there leading you to other water-related resources on the Internet.

There are barriers, rocks in the stream, that limit adoption of this new medium. There are too few vessels to dip into it or float upon it. There are vast deserts where it does not flow, places where its cost is too dear or its quality unsuitable. There are many, many who have not learned to swim or are afraid to try. But its waters are spreading, and more and more, they will touch us all. Sample it. Test it. Share your results. ⌗

Andy Alm, sometimes a writer and editor, is education coordinator for EcoNet and telecommuni-cations coordinator for GREEN. To see what all he's been up to (including a primer for using computer networks in environmental education), check out his home page at <http://www.econet.apc.org/aalm>.

The National Hydropower Reform Coalition has a great fax network. About 20 organizations participate in the coalition, and it is Margaret Bowman's job to keep the network up-to-date on the news, policy, and activities of hydropower reform.

Margaret is the Director of American Rivers' Hydro-power Reform Center. Part of her job is to coordinate the reform coalition, and chief among her duties is to manage the flow of informa-tion. This means directing the flow of important legal and policy documents, news and other materials to the membership. As with any group, the objective is to send them as much but not more than they need. And the material must get there quickly.

Most of that flow of information travels by fax. Much of the material that she receives for distribution arrives by fax or in other hard copy form. It requires cover notes and possibly additional text for analysis or explana-tion before it is recirculated to the coalition. She then transmits this data via fax to her network.

The great thing about the fax network is that it does work. As with any issue, information ebbs and flows, so the occasional week may pass where no information is

transmitted. More typical, however, is the transmission of one or more documents per day during the business week. What makes the fax network successful is that one person is responsible for coordination—receiving and processing information and transmitting it.

Other distribution networks never work as well over time. The vaunted telephone tree of the past ground to a halt if one key person was not available or could not perform. As we usually see, sending informa-tion out to state groups in anticipation that they will send it along to local members often does not work regularly either. What does work is having one person funded and respon-sible for maintaining the flow of information.

Margaret reports that even though the information is flowing, the system is not without problems. Due to difficulties with her com-puter faxmodem, the faxing, including dialing in twenty fax numbers, is done manually. She has plans to connect a scanner to her system to bring documents onto disk and to update the fax software. This would permit all her work in transmitting documents to be reduced to a few minutes for each distribution. Using email is also on the horizon.

Fax networks work well
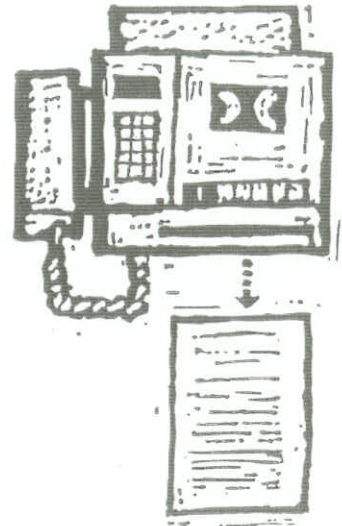
for transmitting information quickly. The limitations are that the members of the network must have a fax online and available 24 hours a day, and that someone must be funded and respon-sible for making the system work. Further, using computer technology to collect, manage and distrib-ute the information via fax offers substantial time savings to the network coordinator. Fax software offers the additional benefit of being able to group recipients according to any number of interests, ensuring that people receive only the information that want and need. ⌗

Contact Margaret Bowman at (202) 547-6900 for more information about the National Hydropower Reform Coalition or to ask her about her fax network.

California Statewide Rivers Assessment
An online river conservation tool

by Linda Stonier

Thorough knowledge of a state's rivers—their values and present conditions—is the essential starting point for river conservation action at the state level. One means of acquiring this knowledge is the "statewide rivers assessment," a cooperative method to inventory and comparatively evaluate river-related resources of value to the public.

The National Park Service through its Rivers, Trails and Conservation Assistance program initially developed the model for statewide rivers assessments that have been conducted, or are underway, in 20 states.[1] Since each state is unique and requires an approach specifically tailored to its resources, institutions, issues and attributes, the breadth and detail of river assessment information varies widely from state to state, and the degree of technological sophistication used in collecting, storing, evaluating, and providing access to this information has evolved with each assessment.

A statewide rivers assessment is not in itself a policy statement or document. Its aim is to provide resource managers, decision-makers and the public with a planning and decision-making tool. The California Rivers Assessment (CARA) was begun for this purpose in 1992 by the California Resources Agency[2] with the recognition that rivers are among the state's most valuable resources and most damaged ecosystems.

As a comprehensive rivers assessment is a long-term undertaking in a state the size of California, the project is designed in phases. In phase I, a professional judgment assessment survey of resource managers, scientists and other river experts across the state yielded information on riparian and aquatic resources conditions on 617 segments of 145 of the state's major rivers. Such information includes the condition of fish and wildlife habitat, occurrence of sensitive plant and animal species, stream bank or riverbed conditions, adjacent land uses and special management designations, as well as the presence of activities such as mining, logging, or channelization. CARA has organized data into a geographic information system (GIS) that codes or "georeferences" each piece of data both its specific river segment and watershed.

Phase II of CARA focuses on selected watersheds, or "demonstration basins" to integrate additional data, including primary field data, for the streams in those watersheds. Landstat imagery, aquatic species distributions, riverine habitat elements, vegetation cover from the US Fish and Wildlife Service/National Biological Service Gap Analysis project and point elements affecting flow and water quality such as dams and diversions, mines, reservoirs, etc. have been assembled for some or all demonstration basins. Documentation of data content, source use and reliability, called "metadata," is another part of the project.

As local river or watershed protection projects increasingly represent a practical means of converting scientific data into acceptable public policy and river management practices, CARA includes an inventory of watershed projects in California. Additionally, an extensive bibliography of river-related sources is an already widely used component of the California Rivers Assessment.

While several other states are managing their river assessment data in digital format, CARA is the first statewide rivers assessment to be available over the Internet. CARA data are posted on several servers such as file transfer protocol (ftp), gopher and world wide web, allowing access via a variety of public domain software products including the popular Mosaic and NetScape programs.

While statewide rivers assessments serve ably as a basis for design and priority-setting of state river conservation policies and programs, they are invaluable tools for local and regional river conservation efforts as well. Potential users include identifying fisheries and riparian restoration needs, developing conservation plans for ranches, farms and forests, identifying baseline conditions for monitoring and setting priorities for future data collection. Currently, private or nonprofit information seekers make up over one-third of all online users of the California Rivers Assessment.

The Internet address for the California Rivers Assessment is <http://ice.ucdavis.edu/California_Rivers_Assessment>.

Footnotes

[1] Statewide rivers assessment have been conducted in Delaware, Florida, Hawaii, Idaho, Kentucky, Louisiana, Maine, Maryland, Minnesota, Montana, North Dakota, Oregon, South Carolina, Vermont, and Washington. Assessments are underway in Arizon, California, Connecticut, and Tennessee. For information about these projects contact the National Park Service in Washington, D.C. at (202) 343-3779.

[2] The California Resources Agency undertook the California Rivers Assessment in collaboration with more than 28 other agencies and organizations providing technical support and river-related information. The Wildlife Conservation Board in the California Resources Agency has provided the majority of project funding to date. The U.S. Environmental Protection Agency and the National Park Service's Rivers, Trails and Conservation Assistance ▶

California Rivers Assessment (CARA)

A special program of the California State Resources Agency developed in collaboration with federal, state and local agencies, and private organizations. A part of the California Environmental Resources Evaluation System (CERES).

Details about the Project and its Support

Rivers Basins of the Demonstration Project

Map of California showing all the demonstration basins

For information about a specific basin, select one of the labeled basins -- outlined in black -- or the text that labels it in the following map (or use the menu below the map).

Carmel River
Cosumnes River
Deed and Mill Creeks
Eel River
Mokelumne River
Owenes River
Upper Sacramento River
Salton Sea and Whitewater River
Santa Clara River and Sespe Creek
Santa Margarita River

More maps

Bibliographies for Selected Califor
Data Holdings, Interactive Queries
Assessment

How it Works

First go to the California River Assessment home page at http://ice.ucdavis.edu/California_Rivers_Assessment.

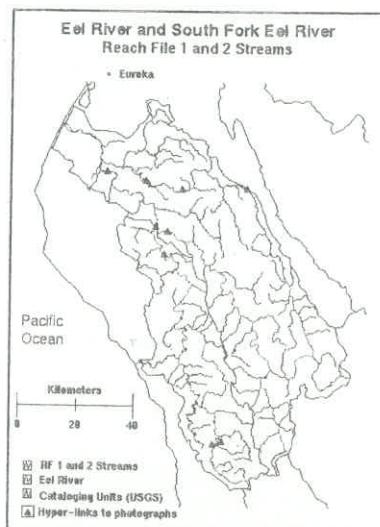From here you have the option to "click" on any of the hypertext for more information.

For example, "clicking" on Eel River sends you to the screen below. From there, among other things, you can create GIS maps overlaying vegetation types, land ownership, shaded topography, roads, major cities and towns, and more.

California Rivers Assessment

Eel River Basin

Maps of the Eel River Basin

Eel River and South Fork Eel River
Reach File 1 and 2 Streams

- Eureka

Pacific
Ocean

Kilometers

0   20   40

RF 1 and 2 Streams
Eel River
Cataloging Units (USGS)
Hyper-links to photographs

Web to GIS Interactive Query System
This allows one to make different variations on most of the maps available below. It takes several minutes to interactively compute these maps.

Encapsulated PostScript files:

Basin map
(similar to the image above; fits on 8.5 by 11 inch paper; file size = 0.3 Mbytes)

program have also contributed funding. The University of California at Davis is contracted to carry out technical aspects of the project and to establish a data center.

Linda Stonier is an outdoor recreation planner for the Western office of the National Park Service's Rivers, Trails and Conservation Assistance program.

Resources and References

ORGANIZATIONS

Telecommunications Cooperative Network provides not-for-profit organizations with one-stop access to a complete set of fully integrated services for development of their communications capacity. These services, coordinated through a growing number of strategic partnerships with other organizations such as Center for Strategic Communications, the Benton Foundation and the Institute for Global Communications include: education, technical assistance, cooperative purchasing, research and development, and policy formation. TCN, 2101 Wilson Blvd, Suite 417, Arlington, VA 22201, (703) 312-7000,

Technology Resource Consortium
The Technology Resource Consortium is an association of nonprofit technology assistance organizations that provide education about and access to information technology to private and public nonprofit organizations.
TRC's mission is:
    1. To enhance the ability of its members to support the effective use of information technology by nonprofit organizations and government agencies
    2. To promote collaboration among its members
    3. To encourage the formation of new technology assistance
    4. Provide organizations and provision of services, particularly in unserved and under served areas.

Selected Members of TRC

Center for Civic Networking
Miles Fidelman, President
91 Baldwin Street
Charlestown, MA 02129-1423
Voice: 617/241-9205
Fax: 617/241-5064
Email: mfidelman@civicnet.org
Serves New England and D.C. areas.

Center for Nonprofit Management
Scott Huff, Director of Technology & Publications
2900 Live Oak Street
Dallas, TX 75204
Voice: 214/826-3470
Fax: 214/821-3845
Email: cnmdallas@igc.apc.org

CompuMentor Project
Daniel Ben-Horin, Executive Director
89 Stilman Street
San Francisco, CA 94107
Voice: 415/512-7784
Fax: 415/512-9629
Email: cmentor@well.com
Specialize in the support of nonprofit telecommunications networks on a regional and national basis.

Computer Mentors
David C. Clark, Executive Director
821 Gravier Street - Suite 600
New Orleans, LA 70112
Voice: 504/529-7248
FAX: 504/529-2430
Email: cmentors@igc.apc.org
Most clients are arts and human services nonprofits in Arkansas, Mississippi and Louisiana.

Desktop Assistance
Marshall Mayer, Executive Director
324 Fuller Avenue - Suite C2
Helena, MT 59601-5029
Voice: 406/442-3696
Fax: 406/442-3687
Email: info@desktop.org
Serves nonprofits in the intermountain West. Offers consulting and training on numerous applications including desktop GIS and desktop fundraising, as well as a regional electronic conference (WestNet).

Fund for the City of New York - Nonprofit Computer Exchange
John O'Brien
121 Sixth Avenue - 6th Floor
New York, NY 10013-1508
Voice: 212/925-5101
Fax: 212/925-5675
Email: fcny@igc.apc.org

Funding Information Center
Elaine Fisher, Director
530 McCullough Street, Suite 600
San Antonio, TX 78212-8270
Voice: 210/227-4333
Fax: 210/227-0310
Email: fic@igc.apc.org
Clients are nonprofits in Texas.

Information Technology Resource Center
Deborah Strauss, Executive Director
Tim Mills-Groninger, Assoc. Ex. Director
6 North Michigan Avenue - Suite 1405
Chicago, IL 60602

Voice: 312/372-4872
Fax: 312/372-7962
Email: itrc@igc.apc.org
Most clients are in Chicago metro area, some elsewhere in Midwest.

Institute for Global Communications - EcoNet
Jillaine Smith, Assistant Director
San Francisco Office
18 DeBoom Street
San Francisco, CA 94107
Voice: 415/442-0220
Fax: 415/546-1794
Email: support@igc.apc.org
Washington DC Office
4108 Garrison Street, NW
Washington, DC 20016
Voice: 202/244-4513
Email: jillaine@igc.apc.org

Management Assistance Project - Computer & Telecommunications Services
Bob Schultheis, Program Director
2233 University Avenue - Suite 360
St. Paul, MN 55114
Voice: 612/647-1216
Fax: 612/643-3580
Email: map@igc.apc.org
Serves nonprofits in Twin Cities area.

Media Alliance Computer Access
Erika Wudtke, Coordinator
814 Mission Street - Suite 205
San Francisco, CA 94103
Voice: 415/771-7133
Fax: 415/441-4067
Email: maca@igc.apc.org
Most clients nonprofits and small media organizations in San Francisco Bay area.

Melody S. Robidoux Foundation
Bruce Helming, Director
6601 E. Grant Road, Suite 111
Tucson, AZ 85715
Voice: 520/795-4090
Fax: 520/795-5499
Email: robidoux@igc.apc.org
Most clients are nonprofits in southern Arizona.

Muse Tech - Miami Museum of Science
Alberto Ramirez, Director
3280 South Miami Avenue
Miami, FL 33129
Voice: 305/854-4245
Fax: 305/285-5801
Email: musetech@igc.apc.org
Serves nonprofits in southern Florida.

Nonprofit Technology Resources
Stan Pokras, Director
437 Poplar Street
Philadelphia, PA 19123
Voice: 215/922-0227
Email: ntr@igc.apc.org
or Tom Sherman
224 South Chester Road
Swarthmore, PA 19081
Voice: 610/328-9773
Fax: 610/328-4607
Email: tsherman@libertynet.org
Serves Philadelphia area, SE Pennsylvania
and S New Jersey.

**Technical Development Corporation-
Nonprofit Computer Connection**
Carol Wilson, Manager
30 Federal Street, 5th Floor
Boston, MA 02110
Voice: 617/728-9151
Fax: 617/728-9138
Email: tdc@igc.apc.org

Together Foundation for Global Unity
Sharon Resnick, Information Manager
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Fax: 802/862-1890
Email: sharon_resnick@together.org

Playing to Win Network
Peter Miller, Director
Education Development Center
55 Chapel Street
Newton, MA 02158
Voice: 617/969-7101 ext. 2727
Fax: 617/969-4902
Email: ptwnd@igc.apc.org
Serves mostly Boston metro area.

WRITTEN REFERENCES

Directory of Computer and High Technology Grants (second edition). An innovative reference directory pinpointing computer, software and related high-tech grants. Richard M. Eckstein, editor. Available for $58.50 (includes s&h) from Research Grant Guide, Inc., PO Box 1214, Loxahatchee, FL 33470.

The Care and Feeding of Online Networks for Nonprofits provides tips and techniques on the human and organizational aspects of how to build and maintain an online network of nonprofits. It will help novice or experienced network users understand the importance for the usccess of a network of training, incentive, and network management among other factors. (Dec. 1994) $6 from CompuMentor (address above).

Guide to Online Systems for Nonprofits provides unique profiles of leading systems from a nonprofit perspective. Includes guidelines for how to select an online system, information about the Internet as a resource for nonprofits and provides and overview of Internet navigation tools. (Dec. 1994) $6 from CompuMentor (address above)

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National Sources

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A quarterly catalogue listing hundreds of software packages for $10-25. The packages are excess review copies donated to CompuMentor for redistribution by computer publications. Only nonprofits and schools may order from the catalogue. Complimentary copy available upon request.
CompuMentor-Software Subscription
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San Francisco, CA 94107
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East-West Foundation
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fax: (617) 542-3333
The East-West Foundation is a charity that recycles computers to support education worldwide. The Foundation recycles Dos or Mac compatible computers. The East-West Foundation only helps charities with equipment or financial sponsors.

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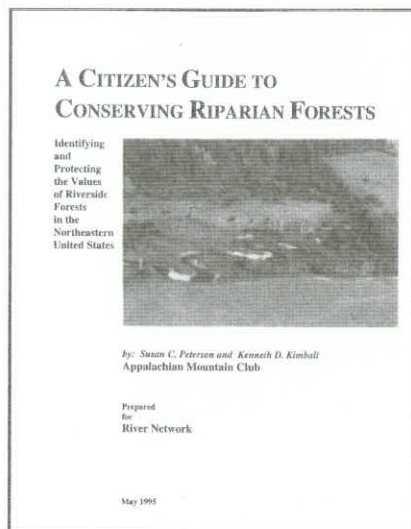We look forward to working with you during this coming year.

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A new guide to conserving riparian forests

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Identifying
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by: Susan C. Peterson and Kenneth D. Kimball
Appalachian Mountain Club

Prepared
for
River Network

May 1995

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A cooperative project by River Network and Appalachian Mountain Club

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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.

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