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WATERSHED
ASSOCIATION**

*"Working together to protect
and restore the Harpeth River"*

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Voices for the Harpeth

Issue No. 2, 2003



Dorie Bolze

The HRWA River Restoration Program recently worked to stabilize the banks of the Little Harpeth River where it runs through the Warner Parks. This was a joint project of the HRWA, the Metro Nashville Parks Department, Jen-Hill Construction, and the Cumberland River Compact. Volunteers including Jennifer Stewart-Wright, Jesse and Saleh (above), were key to the effort.

Volunteers Jump into the Action! **HRWA Launches River Restoration Program**

By Gwen Kanies and Peter Jordan

Through a combination of manual labor and long-term planning, HRWA's River Restoration Program is working to protect and restore stream and river banks throughout Middle Tennessee. With a technical advisory team, state-of-the-art techniques, and a corps of volunteers, this program completed a number of projects this year that will help improve water quality throughout the watershed.

Eroding stream banks are a big reason too many creeks in the Harpeth River watershed are brown, turbid, and hostile environments for fish and other "critters" (including humans), rather than clear and life-sustaining arteries of ecological life.

HRWA initiated its River Restoration Program in the fall of 2002 with a \$50,000 grant from the Tennessee Department of Agriculture's Nonpoint Source program. The goal of the project was to demonstrate at specific sites to property owners, public agencies, and developers different approaches that they can use to help improve water quality. The professional jargon for these water quality improvement approaches is "Best Management Practices" (BMPs). (For a glossary of "RiverSpeak" terms, go to our web site and pull up the 2002 issue of *Voices for the Harpeth*).

Experts from federal and state agencies and private companies helped HRWA

Continued on page 2

We're on the Web! **www.harpethriver.org**

Thanks to the creativity and expertise of Don Green, the Harpeth River Watershed Association is just a mouse-click away from anyone in the world who wants to find out what we are doing and how to be a partner in efforts to preserve and restore the health of the Harpeth. When he's not writing HTML tags, Don is the storm-water coordinator for the City of Franklin. He was previously the assistant director of the Tennessee Department of Agriculture's Non-point Source pollution program.

Help us build a web site that provides one-stop shopping for everyone interested in maintaining the Harpeth. Visit us online at **www.harpethriver.org** — we welcome your feedback and ideas.

The HRWA web site and email service is generously hosted and provided free by ISDN-NET as part of its commitment to water quality improvements of the rivers that brought life to the Middle Tennessee Basin, and its ongoing efforts to use communication technology to re-create community.

Voices for the Harpeth

NEWSLETTER EDITORS: **PETER JORDAN AND DORIE BOLZE**

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Help us get the word out —
Display copies of the HRWA newsletter at your business. Call us at 790-9767 for extra copies and display stands.

If you know others who would be interested in the HRWA and its work, please pass on this newsletter or send us names for the mailing list.

Continued from page 1

implement a range of BMPs in partnership with cities and local landowners. The pilot projects included “cedar revetments” on an unnamed tributary in a local Franklin neighborhood and on the West Harpeth (photo at right), a rock jetty on Turnbull Creek in cooperation with the city of Kingston Springs (top left photo, page 3), and several riparian or streamside restoration projects along the main stem at the Narrows of the Harpeth, along Spencer Creek and the Little Harpeth in Brentwood and Warner Parks.

The projects ranged from simple tree planting (3500 trees planted in all) and willow staking, to high-tech geoweb erosion control mats with enmeshed planting (see photo below).

Stabilizing Stream Banks

“One of the problems we see is massive stream bank erosion,” says Gwen Kanies, HRWA environmental specialist and volunteer coordinator. “Riverbanks need vegetation with deep tree and shallow herbaceous roots. Any stream without a vegetated bank is at risk to erosion and bank loss. This means mud is going in the river and mud is the largest single pollution source in the Harpeth. If you combine a lack of vegetation with increased



Dorie Bolze

fresh-cut cedar trees are secured to the bank. Even after the needles are gone, the tight branches will protect against erosion and trap sediment that will allow new vegetation to grow. This is on Boyce Magli's property along the West Harpeth in Williamson County.

flooding and storm flows, you have a system of eroding stream banks, which means landowners are losing property and increased sediment is degrading the river.”

You may be surprised to know that a lawn doesn't cut it do the job when it comes to stabilizing a river bank. “Many folks think lawn grass is good enough to hold soil in place, but we saw extensive erosion in a yard that had been mowed down to the bank,” says Kanies. “We installed a cedar



Dorie Bolze

Over 30 volunteers — including students from Belmont University and employees of Blue Ridge Mountain Sports — helped install geoweb erosion control mats and plantings to stabilize this bank of the Little Harpeth at picnic table #11 in Edwin Warner Park.



Ashland City Times

In Kingston Springs, Parks Director Amanda Metcalf stands on a rock jetty that was installed to stabilize the bank of Turnbull Creek.



John McFadden

In one morning, Girl Scout Troops 1168 and 1704 and other volunteers planted about 1,000 trees along the Little Harpeth in Brentwood's new Tower Park.

revetment of fresh cut cedar trees anchored to the bank, and that helped stabilize the soil and save the landowner's property.

"An eroding bank may require a combination of methods to control the erosion and then to rebuild the bank and its streamside or riparian zone," explains John McFadden, HRWA science director. For example, to control erosion, a cedar revetment may be used to protect the bottom (toe) of the bank from the rushing water. To deploy a cedar revetment, one or more cedar trees are laid lengthwise along the bank and secured in place using cable and posts. Even after the cedar's needles drop off, its tight branches will

slow the water before it touches the bank, helping protect against erosion. As the water slows, it will drop some of its load of sediment (mud) and leaves, thereby helping to actually rebuild the lost bank.

HRWA used this method at two sites. The projects included live willow staking and some tree planting. As the bank rebuilds, volunteers may come back and plant additional willows and other water-loving bushes and trees in the cedar revetment and its new layer of mud and sediment.

The city of Kingston Springs used a rock jetty (a train of rocks big enough to stay in place during high water) to stabilize the bank along Turnbull Creek, a

favorite local fishing hole (see Figure 4). The water current is deflected away from the bank by the jetty, thus protecting the base of the bank. Small rocks and sediment begin to deposit downstream of the jetty and gradually the deposition reforms the bank.

Volunteers Make the Difference

"Our River Restoration Program depends on the Volunteer River Restoration Corps to do all projects," says Kanies. "Our corps of volunteers has made it possible for HRWA to do such a large number of projects in such a short time. To all our volunteers, we send a hearty THANK YOU! and we hope to see you at our next project."

Become a River Rat!

Join the Volunteer River Restoration Corps

Nearly 100 volunteers have already planted an astounding 7,000 trees as part of the Volunteer River Restoration Corps (VRRRC), a joint effort of the HRWA and the Tennessee Scenic Rivers Association's Duck River Project.

"School groups, scouts, property-owners, HRWA and TSRA members, and other river-lovers are becoming river rats and joining the VRRRC program," says John McFadden, HRWA director for science programs. "It's a great way to make a difference and give something back to the rivers we all enjoy."

In addition to planting the 7,000 trees, volunteers have installed cedar revetments and worked on other projects to improve the "riparian zone," the streamside area that is the most important factor in the ecological health of a creek.

"Joining the VRRRC is a chance to get out into the watershed, see problems first-hand, and be part of the solution," says McFadden. "Everyone is welcome. Contact us, then bring your shovels and buckets, your church group, scout troop, classroom or neighborhood organization, and come on out to the river."

Ready to get your feet wet? Turn the page and fill out the contact card or email us at hrwa@harpethriver.org.

The Chestnut Group: Artists Painting on Behalf of the Harpeth

By Dorie Bolze

Though a young group of landscape artists, the Chestnut Group nonetheless has been successful at raising funds from the sale of their artwork — which is inspired by protected and threatened landscapes — to benefit conservation organizations. The HRWA and Land Trust for TN were lucky to be able to work together with the Chestnut Group this past spring to hold the second plein-air “Paint Out” the group has done. On April 25, a group of Chestnut Group artists painted scenes outdoors (this is what is meant by “plein-air”) to capture views of the Harpeth as it winds around Moran Road. That evening at a cocktail dinner buffet at the Andrews’ farm, 250 people came to view and buy these freshly created paintings and others at both a silent and live auction. Ticket and art sales plus generous sponsors raised a net of \$25,000 from this event for both groups! We thank everyone for all the effort that went into this endeavor — HRWA’s first big event! See Special Thanks on page 14.



Kate Donnelly, landscape artist and Chestnut Group member, paints at the April 25 plein-air “Paint Out.”

**If you missed this event, MARK YOUR CALENDAR for another Chestnut Group event on November 23!
“Documenting the Vanishing Landscape 2003: Plein-Air Painting along State Route 840”**

Chestnut Group members are right now capturing on canvas scenes of lands threatened by State Route 840 that is cutting along the vital pristine headwaters of the Harpeth. **Please come to the Reception and Opening of the art show on November 23 at the Warner Parks Nature Center from 3-6 pm.** The show runs through January. Proceeds from sales will benefit HRWA and Friends of Warner Parks. Contact Friends of Warner Parks to RSVP—370-8053.

The Harpeth — it flows through our lives. We all live downstream.

The Harpeth and its tributaries drain 872 square miles. While much of it is still forested or agricultural, another third is one of the fastest growing regions in the United States. We need your help to preserve and restore the ecological health of this watershed. Please join the Harpeth River Watershed Association and get involved!

✓ **Yes, I want to support and join the efforts of others with the Harpeth River Watershed Association. Please send me the Harpeth River color map and free TN river poster of my choice:** small stream, stream, or river ecosystem.

Name: _____

Address: _____

Phone: Day _____ Evening _____

Email: _____

Volunteer Interests:

- River studies and restoration projects
- Education projects
- Special events/Recreation
- Helping in the office
- Other _____

Sponsorship Levels:

- \$20 \$100
- \$30* \$250
- \$45* \$500
- \$50 \$1000
- Other

Consider including the HRWA in your estate planning ...

- Please send me more information about including HRWA in my will.

Pay by credit card online at www.harpethriver.org

* Donations of \$30 or more receive a free HRWA t-shirt. The \$45 family membership includes 2 t-shirts, a set of TN river posters, and wildlife trading cards (while supplies last).

Please make checks payable to the Harpeth River Watershed Association and return this form and your contribution to: **Harpeth River Watershed Association, P.O. Box 1127, Franklin, TN 37065**

For more information, call 790-9767 or visit WWW.HARPETHRIVER.ORG.

The HRWA is a 501(c)(3) non-profit organization and contributions are tax-deductible.

Board Spotlight: Matt Dobson

Building Investment in the Health of the Harpeth

By Peter Jordan

“A river can die from a thousand pinpricks,” says Matt Dobson, HRWA’s treasurer and chairman of the Harpeth River Stewardship Council, launched to build a long term investment in the health of the Harpeth. The Stewardship Council is the first major donor campaign for HRWA (see box below).

“No one pinprick is a killer, but cumulatively these will kill a river system. Decades of ‘insignificant’ pinpricks have polluted, and muddied, and decreased the dry month flow of the Harpeth which runs by our family farm off Hillsboro Road in Williamson County,” notes Dobson. His family has owned the farm for close to 75 years.

As a child Dobson canoed, swam, and fished the Harpeth and he hopes his own children Matthew, 6, and Walt, 3, will have the same opportunities. “But it is not the same river we knew in years past. When I was a youngster, this river did not look like split pea soup during the low flow months of July and August. It didn’t smell bad in areas. The bottom was rocky and gravel bars were not covered by heavy algae and moss,” says Dobson.

HRWA Offers Scientific Solutions

Over the years, Dobson and neighbors presented these observations and issues to political leaders in their efforts to preserve the Harpeth. With the formation of HRWA in late 1999, Dobson feels that the river and its tributaries now have an effective collective voice.

“The scientific background is what gives the organization its strength. We are learning from HRWA’s sediment study and stream assessment survey that upstream development, with all its impervious surfaces, is causing increased runoff and siltation which contributes to the Harpeth being a lot murkier and drier,” says Dobson.

“Williamson County and southwest Davidson County, which encompass over half of the watershed, have many successes—a flourishing economy, job creation, high quality education, historic

preservation, and quality of life. The Harpeth plays a significant role in creating this quality of life. But success has led to environmental pressure, especially for the Harpeth,” explains Dobson. HRWA is helping promote existing science and engineering to handle these challenges and to promote strong environmental quality standards.

“Stormwater runoff, sewage treatment, and water use are issues when you build a Highway 840, a TVA transmission line, a 2500-unit subdivision or a mall and commercial district. Sound engineering and growth planning can be done with water quality in mind that can minimize environmental impact. Experience, expertise, and data are available if we choose to use them. If we are wise stewards of this watershed, we can have both economic well being and a superb natural environment,” Dobson believes.

“Cumberland Region Tomorrow’s analysis of development patterns for the greater Nashville region shows that by 2020 the Harpeth will be significantly degraded if current practices do not change. HRWA brings the talent and expertise to the table to design and plan development differently, in ways that will improve the quality of our environment and the quality of our lives,” says Dobson. “We’re already



HRWA treasurer Matt Dobson with his sons, Matthew and Walt. Matt is Chairman of the Harpeth River Stewardship Council, which he launched to build long-term investment in the health of the Harpeth.

beginning to make a difference, but we still have a long way to go.”

We Can All Be River Stewards

“The challenge is upon us. If we do not seize our opportunities to have a voice in development practices in the greater Nashville region, the Harpeth River will be seriously damaged over the next decade, damage that may well be irreversible. Tennesseans who care about their quality of life should consider becoming river stewards,” Dobson says. “The Stewardship Council membership is a small price to pay for the benefits it brings to future generations. As we keep reminding members and friends, ‘we all live downstream.’ ”

Harpeth River Stewardship Council: Your Commitment to Make a Difference

The Harpeth River Stewardship Council is a group of individuals and businesses who have made the commitment to support our efforts with a significant tax-deductible donation annually for three years. Contributions have ranged from \$250 to \$3,000, with most contributions at \$1,000. These funds are vital to support HRWA’s core scientific programs and technically trained staff, who have been successful at bringing private and government grants of over \$500,000 to the Harpeth River to invest in projects through 2005.

Stewardship Council Chairman Matt Dobson and the leadership committee hope to raise \$250,000 over the next 3 years. Since the Council was launched last November, 51 committed members have joined and \$49,000 have been raised. **In order to help meet the goal of \$50,000 for 2003, Orrin and John Ingram will be matching contributions 50 cents to the dollar, which we hope will generate a total of \$30,000 by the end of this year.** Please consider joining this fall and have your contribution matched!

For more information, contact HRWA at (615) 790-9767.

HRWA Builds Scientific Muscle

By Peter Jordan

*“Rather than love, than money,
than fame, give me truth.”*

Henry David Thoreau, *Walden*.

“Be it life or death, we crave only reality,” says Thoreau in *Walden*, proposing to erect a “Realometer” to find a “solid bottom” and separate fact from the “mud and slush of opinion.”

Creating “realometers” is perhaps the most important mission of the Harpeth River Watershed Association. Since its founding in late 1999, the conservation organization has brought a solid foundation of scientific research to the policy table in Middle Tennessee. Until then, no one had more than opinion and personal observation to back up their sense that the river was under strain and getting worse in places, nor enough information on which to build plans for making things better.

River-lovers had observed subjectively that the Harpeth and its tributaries seem to be muddier and smellier, drier in summer and more likely to flood in winter and spring, but it took the HRWA team of scientists, technical advisors, and volunteers to put existing data together with new research in order to begin drawing an accurate and objective picture of the river’s health.

The HRWA began analyzing United States Geological Survey (USGS) water flow data from the Harpeth going back to the 1920s, water quality sampling done by the Tennessee Department of Environment and Conservation (TDEC) to generate its list of impaired streams, recent field work by the United States Environmental Protection Agency, and HRWA’s own research projects, to determine what is needed to improve degraded areas of the Harpeth. Some of the data has only been collected in the last year or two, some as a result of law suits against the Lynwood sewage treatment plant and other state issues.

Believing, as Thoreau did, that “Any truth is better than make-believe,” HRWA has built a solid portfolio of scientific facts about the condition of the Harpeth and its tributaries. Whether

HRWA has already completed three major research projects: “**Harpeth River Watershed Sediment Study**,” “**Volunteer Site-Specific Visual Stream Assessment of 303(d)/305(b) Listed Streams in the Harpeth River Watershed**,” and “**Harpeth River Mainstem Dissolved Oxygen Study**.” You can download the reports for these studies from the HRWA web site: www.harpethriver.org.

Two additional studies are underway to measure lead in the upper Harpeth from the old eroding battery dump in College Grove and to assess the effects of bank erosion on the amount of mud in the river system.

measuring how much dirt floats down the river (the sediment study), observing the impact of development (the visual stream assessment), measuring whether the river has enough dissolved oxygen for fish to survive, assessing the level of threat from lead in the river, or studying how fast our streambanks are disappearing, HRWA is finding out first hand about the status of the watershed — and forming plans and suggesting ways to improve its health.

Liquid Mud?

As reported in last year’s newsletter, the sediment study conducted in partnership with the Cumberland River Compact (CRC) yielded a “dirty picture” of many subwatersheds, with high levels of turbidity (dirt in the water) caused by stormwater runoff, faulty erosion control on construction sites, and agriculture and lawncare practices. Designed by Dave Wilson (see the Volunteer Profile on page 9) and a team of experts with the USGS, TDEC, and the state’s Nonpoint Source Program, the study combines their expertise with hundreds of man-hours of river-loving volunteers, who went out to 46 different locations, hanging off bridges over rain swollen rivers as well as went out in storms to take 1,050 water samples at all hours of the day and night.

A Raft of River-Rats

The sediment study underscores the importance of taking careful precautions as Middle Tennessee continues its rapid development. But beyond the data actually collected, the sediment study is important because of its methodology. The combination of volunteer samplers willing to get cold, wet, and muddy plus the scientific and number-crunching expertise of the project’s

leaders can be duplicated in future research projects here and in other watersheds.

“The sediment study shows how to take the scientific and technical expertise of people like Dave Wilson and John McFadden and exponentially multiply the brainpower, using trained volunteers to do the testing and collect the samples,” says Dorie Bolze, HRWA executive director.

Where is the Habitat?

The visual stream assessment study leveraged brainpower as well. HRWA staff trained volunteers to look for sixteen significant environmental benchmarks at 217 different sites. Eight of the benchmarks were quantified, so the volunteer observers could give each site a numeric score in addition to photographing the conditions (and over 800 photographs were taken!). They identified 48 sites with serious water quality related problems.

“If natural resource agencies had done this assessment with tax dollars and professionals, they would have spent countless dollars surveying the Harpeth watershed streams to identify polluted sites,” says Bolze. “Our volunteers not only helped identify the worst problem areas in the watershed, they also showed how natural resources managers can work with HRWA to use their limited staff time more efficiently. Our volunteers spent more than 550 hours on this project alone. If it weren’t for volunteers, our research projects would be prohibitively expensive.”

Death by Suffocation?

Like people, fish and other aquatic life need oxygen to survive. Dissolved oxygen (DO) levels are highest in shallow, turbulent, cool waters, while the oxygen levels decrease in deep water

and in areas where bacteria and algae consume the oxygen.

“High numbers of bacteria and algae can use up all the oxygen in the water, causing fish and other aquatic life to suffocate,” explains Dave Wilson, one of the designers (with Rick Lockwood and John McFadden) of “The Harpeth River Mainstem Dissolved Oxygen Study” completed in the fall of 2002. “A DO study is like taking the pulse of the river’s health. It gives us an idea of the river’s resiliency and its ability to overcome certain types of stress.”

As a result of this work and the EPA’s, TDEC added the section of the main Harpeth from Franklin to Cheatham County where the clean south Harpeth comes in to the 2002 list of impaired streams.

Unfortunately, this river stress test sets off some environmental alarm bells. At five of the six sites tested, DO levels were “low on oxygen and potentially harmful to river life,” says Wilson. “The Harpeth River is under the influence of many factors that can lead to low DO conditions harmful to aquatic health,” says Wilson. “The river receives excessive nutrients from waste water treatment plant effluents, suburban runoff, and agricultural runoff. It also has long unshaded stretches lacking riparian vegetation and many deep sections with poor aeration.”

Local Treasure, Globally Significant: The Harpeth is Biologically “Rich”

By Dorie Bolze and Eddy D. Bateman III, summer intern

Except in the tight circle of conservation biologists, few people know that the southeastern freshwater rivers in the United States, specifically the Cumberland, Tennessee, and Mobile river systems, are unique to the world. **The lower half of the Harpeth River was specifically identified as one of 69 priority biological areas for the Cumberland and Tennessee River systems by the Nature Conservancy in its study in 2002. Did you know you were living in a global biological “hot spot” as these folks like to call it? Find out more bio-facts at www.harpethriver.org.**

But the river isn’t terminal, according to our environmental cardiologists. Anyone with a creek (even a dry one) in or along their property can get those aquatic arteries flowing more effectively by restoring a vegetation buffer. Planting trees or shrubs, not mowing, limiting livestock access, and other options will restore a buffer along the stream that will provide critical shade and a filter. The most significant finding of the visual stream assessment was that over 100 sites had severely degraded “riparian” (streambank) zones or none at all.

Losing Ground?

Meanwhile, HRWA initiated yet another study, this one on streambank erosion. More than 30 volunteers have signed up for a year-long study of the

rate of erosion in the watershed, committing to visit sites near their homes six to eight times during the year to measure how fast the streambanks are disappearing into the flow of the rain-swollen Harpeth or one of its tributaries. Designed by McFadden and Wilson, the study complements the sedimentation study, examining the streambank erosion responsible for much of the sedimentation.

“Because of erosion, landowners are losing property, and the river is losing important habitat,” says Wilson. “With this study, we hope to get an objective measurement of this process and to suggest where to focus efforts to minimize erosion.”

A key focus for HRWA is suggesting how to design developments to reduce runoff, by encouraging rainwater to soak into the ground rather than running off into the nearest drain and flooding the watershed. New federal stormwater regulations affecting much of the Harpeth River watershed require cities and counties to reduce pollution and flooding from stormwater runoff. HRWA is also bringing in collaborators and providing expertise on how to devise land use plans that have water quality goals as a purpose.

But we can’t do anything effective about problems like stormwater until we know the facts. HRWA’s field work has been critical to obtaining and analyzing this “on-the-ground” information. Now HRWA can form strategies to restore degraded areas and protect healthy sections. HRWA’s research projects are helping the people of Middle Tennessee discover how their river system works and what they can do to protect and restore it.



**HARPETH RIVER
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HARPETH RIVER SPECIALTY LICENSE PLATE?

If you have heard the debate over who can have a specialty license plate in Tennessee, you know that the program itself might be at risk of dissolution. But in case it’s still a go, we are researching the possibility of making a Harpeth River Watershed Association license plate available.

With recent changes in the program, we have to pre-sell 1,000 tags before we can even be approved to get our own plate into the program. If you’re interested in putting a pretty Harpeth River plate on your vehicle (and don’t forget your farm trucks and trailers), please let us know. Do NOT send any money now. We’re just trying to see how many people are interested and whether it’s feasible for us to get into the Specialty Tag Program. Special tags are an additional \$35 above regular annual registration.

Let us know if you are interested: 790-9767, hrwa@harpethriver.org.

***We would love the help of a few people
with this project! Call us!!***

The Beauty of Benthic Bugs: Indicators of Water Quality

By Peter Jordan and John McFadden

A stonefly won't win any beauty contests — unless the judges are entomologists or ecologists. To the uninitiated, a stonefly looks like an aquatic roach or an elongated tick.

But if you love clean water, stoneflies, mayflies, and caddisflies will worm (pun intended) their way into your heart. The presence of these creepy “critters” is the most reliable indicators of a healthy stream.

When scientists sample for chemicals or other physical properties of a stream, they test only for specific substances. Our fellow creatures, however, are sensitive to a far broader range of environmental toxins, and they're there all the time, so they offer a constant broad-band measure of what flows downstream other than water day in and day out.

What Bugs Tell Us About the River

“In most situations, the best method of determining the long-term ecological health of a stream is the evaluation of the aquatic biological community living within it,” explains Jimmy R. Smith, aquatic biologist with the Tennessee Division of Water Pollution Control.

If nothing at all is alive in a stream habitat that should normally support life, you have a “very serious pollution problem,” Smith says.

But even if you see something squirming or wriggling or crawling or darting, your stream may still have problems. You've got to identify the type of “benthic bug” (“benthic” means “living on the bottom of a body

of water”) to measure the health of an aquatic environment.

“Like all life, aquatic insects can tolerate various conditions,” explains John McFadden, HRWA's director for science programs. “For water quality purposes, we organize aquatic insects into three (general) categories based on pollution tolerance: pollution tolerant, intermediate and sensitive. Pollution tolerant bugs such as aquatic worms thrive in polluted water. There's a special category of worms called ‘sewage worms.’ If they're the only life in a creek, you're in trouble.”

The next group up the pollution scale includes intermediate bugs such as the crayfish or crawdaddy. “These guys can move and avoid pollution,” says McFadden, so they may be found in water ranging from clean to polluted. They can survive in a polluted stretch of river by moving into cleaner water before the pollution kills them.

So what you hope to find at the bottom of your local creek are sensitive insects — the bugs that can only survive in relatively clean water. Sensitive bugs include caddisflies, mayflies, and stoneflies.

“The real test is to look at how many of each different group you can find in the creek,” says McFadden. “If you only have a few sewage worms but lots of good bugs like stoneflies and mayflies, you probably have good quality.”

In the Harpeth River, places with lots of sensitive benthic bugs tend to include headwater areas where the impact of human activities has been minimal or well confined such as the Kelly Creek area in Leipers Fork, and even Arkansas Creek. (Good news — Arkansas Creek, just below the Williamson County landfill, was recently removed from the state's list of impaired streams thanks to the efforts of Lewis Bumpus, Williamson County Solid Waste Director.)



Mississippi College

The presence of stoneflies and other species of “sensitive” bottom dwelling insects provide good news about the health of streams.

Sculpture for Sale to Benefit HRWA

Mike Walton, Board President, shows his many talents

By Dorie Bolze

HRWA Board President Mike Walton is not only a bona fide River Rat for having canoed the entire 125-mile long Harpeth twice, he is also an accomplished sculptor. For the April 25 landscape artist “plein-air” event, Mike was spurred to finish his bronze sculpture of a snapping turtle that caught his eye during his 2001 float and survey trip.



Review Appeal

Five of these wonderful sculptures have been sold and Mike has generously donated all proceeds to the HRWA. To order your sculpture, contact the HRWA, 790-9767.

This beautiful work of art will remind you of the beauty of the Harpeth and its wildlife and that you have contributed to efforts to protect your river.

Contact Image Arts, Inc. for all your photography needs — family photos, touch-ups, invitations, posters and any form of print material that involves photography!

Tell them the HRWA sent you! 420 Cool Springs Blvd. 771-8565.

Harpeth River Volunteer Extraordinaire!

Dave Wilson: Retired Professor Recycled as River Rat

By Peter Jordan

Dave Wilson turned 73 years young this June, but he has the energy of people half his age. If you work with him on a river restoration project, you're likely to get run over by his amphibious wheelbarrow or exhausted trying to keep up with his pace.

But Wilson's physical energy is only a fraction of what he brings to the Harpeth River table. A professor emeritus at Vanderbilt in chemistry and environmental engineering, Dr. David Wilson led the HRWA's ground-breaking (no pun intended) sediment study, for the first time providing an objective measurement of the tons of dirt that flow down the Harpeth every time we have a heavy rain.

With a Ph.D. from Cal Tech and a bachelor's degree from Stanford, both in chemistry, Wilson is one of HRWA's most valuable volunteers. With the help of colleagues in the Tennessee Department of Environment and Conservation, the U.S. Geological Survey, the Natural Resources Conservation Service, and Tennessee's Nonpoint Source Program, he designed the sediment study for the Cumberland River Compact, then moved the operation in 2000 to CRC's new ecological ally, the HRWA. At the watershed association, he found dozens of volunteers eager to get themselves wet measuring the dirt in the watershed's rivers and creeks after heavy rains.

Even before the results were in on the sediment study, Wilson went to work with HRWA's John McFadden and others on two other projects, the dissolved oxygen study completed in September 2002 and the streambank erosion study now underway.

A Longtime Clean Water Activist

Wilson still has the same fire in his belly that has driven him as an environmental activist since the '60s, when he

and other scientists looked at the Lake Ontario beaches near Rochester, New York, and discovered people literally swimming in sewage.

Wilson helped spearhead formation of the Rochester Committee for Scientific Information, bringing irrefutable, objective observation and scientific sampling to the argument for clean water in the area and then subsequently the evidence of lead poisoning in children. As a result, by 1967 sewage treatment facilities in the area were upgraded and legislation prohibiting the use of lead paint was instituted.

Don't Kill the Goose!

"We all live downstream," says Wilson, "and you cannot ignore environmental problems. That would be like saying, 'Stop the world! I want to get off!'"

"Humans have a potentially fatal flaw," he warns. "We are very smart (though not always wise), and we have great skill with our hands. That combination gives us great power. But combined with all that power is an incredible ability to believe what we want to believe in defiance of a huge mound of evidence that it is simply not true. College-educated people — people with MBAs or degrees in engineering and science — are ignoring the evidence that what we're doing now will cause massive future damage to our environment if it's not controlled. We're numerous and powerful enough so that it's well within our capability to destroy our environment to the point where life is virtually unlivable. Look at Haiti, for example."

Faced with that kind of threat, Wilson believes, it would be irresponsible for a person with a technical background like his not to help. The Harpeth River watershed is a perfect target because it's a definable area where public and private efforts can pay off with visible results.

"The Harpeth River also serves as a microcosm of a river system under stress



Morris Blanton

Dave Wilson helps plant trees to rebuild a natural buffer along the Little Harpeth in Brentwood's Tower Park. Lisa Morrow, co-chair of the November 2 event, "Rivers of Righteousness," (see p. 14) looks on.

from rapid growth," Wilson says. "The beauty of the area is a major ingredient of its quality of life, but because of this, thousands of people are moving in, and the commercial and residential developments built to accommodate these new residents are stressing the environment that attracted them in the first place. Our intent is that HRWA's research projects can suggest some ways to enjoy the golden eggs of development without killing the goose that lays them."

After a good rain, in some places, creeks and rivers in the Harpeth River watershed are almost "thick enough to plow," says Wilson. But in other locations like Slickrock Branch and Leipers Fork, the creeks are still clear enough that you can see the wildlife in the water. With the help of many volunteers, Wilson hopes Middle Tennesseans will see more of these pristine waters.

Dave Wilson recently relocated to Michigan to be closer to his children. He continues to work on HRWA projects, but will almost assuredly be getting involved near his new home as well.

ARE YOU RIVERSMART?

We Can All Help Improve Water Quality



Did you know that...

- ◆ the average household uses 300-350 gallons a day!
- ◆ the average household uses about 50% of that water on their lawns!

You can have a profound impact on the health of the Harpeth by how you use water and manage your land no matter where you live.

Review these tips from River Network's national RiverSmart campaign to see what you can do for the Harpeth. You'll find even more at our web site: www.harpethriver.org.

- ◆ **Plant trees and shrubs along your creek bank.** Native vegetation provides wildlife habitat and protects the creek from heat, fertilizer runoff, and erosion. Try to create a buffer of native vegetation a minimum of 10-feet wide from the creek edge.
- ◆ **Water your lawn in the morning or evening instead of midday.** During the heat, significant amounts of water are lost to evaporation.
- ◆ **Minimize fertilizer on your lawn and don't use it near creeks.** Excess fertilizer will wash into the creek and cause algae problems.
- ◆ **Install a rain barrel to catch the rain off your roof and water your lawn.** See page 11 to order one!

RiverSmart is a national educational campaign of River Network, sponsored by Swiss Re. For more RiverSmart tips, camera-ready print ads and television spots, visit their website at www.rivernetwork.org.

- ◆ **Take a walk in the rain to see where your rainwater is going.** Look for ways to encourage rain to soak in on your property, such as landscaping a rain garden.
- ◆ **Repair leaky faucets and install low-flow shower heads and toilets.**
- ◆ **Fix any car leaks.** Drips on

pavement wash into creeks when it rains.

- ◆ **Don't put toxics in the trash, down the drain, or down the stormdrain.** Dispose of chemicals, batteries, used oil, and paints at designated sites. To locate sites, contact your county, go to the HRWA web site, or call TDEC (1-800-287-9013) for Used Oil Drop Off sites.

YOUR SEPTIC TANK NEEDS YOUR ATTENTION

By Eddie D. Bateman III, Summer Intern

Residential septic systems when they are not properly maintained become a threat to water quality. Here are some helpful tips for making sure your system works safely and efficiently — and protects the Harpeth.

- ◆ **Pump your septic system every 3 years and visually inspect it every year.** Proper maintenance of your septic system can save a lot of money in the long-term.
- ◆ **Do not flush non-biodegradable materials** such as plastics, disposable diapers, sanitary napkins and applicators. They fill up the septic tank and will clog the system.
- ◆ **Do not allow paints, motor oil, pesticides, fertilizers or disinfectants to get into your septic system.** They can pass directly through the system and contaminate groundwater. These chemicals also kill the beneficial bacteria contained within the septic system.
- ◆ **Do not use caustic drain openers** for a clogged drain. Instead use boiling water or a plumbing snake to free up clogs.
- ◆ **Restrict or terminate the usage of a kitchen sink garbage disposal attached to your home septic system.** Disposals increase the amounts of solids in the septic tank, making them slower to decompose and increasing the chance of overflow and contamination of groundwater.
- ◆ **Do not put too much water in the septic system.** Do not take extended showers or leave the water running for an extended amount of time.
- ◆ **Leave the area over the drainfield undisturbed,** with only mowed grass cover and no deep-rooting plants or heavy equipment.

For more information, visit www.harpethriver.org.

High Quality Streams Identified in Harpeth River Watershed

By Dorie Bolze and Gwen Kanies

For the first time there are legally designated high quality streams (known as “Tier II streams”) in the Harpeth River watershed. A Tier II designation by the TN Department of Environment and Conservation means that no permit can be granted that would degrade the stream, by construction or other activities, unless the state Water Quality Advisory Board determines there is an economic or social necessity. This is good news for the Harpeth because a Tier II designation helps protect high quality streams that are important to maintaining and restoring the health of the Harpeth river overall.

As a result of recent legal actions on construction of Highway 840 south of the Leipers Fork area of Williamson County, stream assessments were funded by the TN Department of Transportation (TDOT) and conducted for all streams in the vicinity of the route left to be constructed. This included the section under construction from Highway 100 to Bending Chestnut and the last “unlet” section from Bending Chestnut to Thompson’s Station. TDEC just completed its determination and identified about 23 sections of headwa-

ter streams in southern Williamson County around the Bending Chestnut and Boston communities as Tier II streams. These include...

South Harpeth subwatershed:

- Unnamed tributaries to Kelley Creek on the west side
- Kelley Creek itself
- Copperas Branch
- Unnamed tributary to South Harpeth Creek

Leipers Fork section of West Harpeth subwatershed:

- Headwaters of Garrison Creek
- Franklin Springs region—headwaters of South Garrison Branch
- Burns Branch and Boston Branch of Leipers Fork

As a result of this survey, TDOT’s new leadership will now be working with local citizens who have been active for years regarding environmental concerns with 840. They have invited HRWA and others to be involved in adjusting the design in light of the high quality streams in the route’s vicinity. For example, the “unlet” section of 840 is currently designed to cut through the Franklin Springs, an historically important source of drinking water for the city of Franklin.

LEFT: Kelley Creek in the Leipers Fork area of Williamson County on a misty morning. Lack of erosion control on a section of 840 under construction on Pinewood Road sent sediment into Kelley Creek in August 2002. Subsequent lawsuits and the efforts of the new leadership at TDOT should reduce the threat of further erosion from construction underway in this section. No creek crossings for this section have yet been approved.

With TDOT funding, the Nature Conservancy of TN assessed Kelley Creek and found rare seep communities fed by groundwater, creeks with a highly diverse number of species of fish and other aquatic life, and some of the most exceptional habitat for amphibians and reptiles in Middle Tennessee. Contact HRWA at 790-9767 for a copy of the study.

Use a Rain Barrel!

Here’s an easy way you can protect the Harpeth — use the water from your roof to water your yard! The average household uses HALF its water on the yard, so collecting water in a rain barrel can help reduce your need to take precious water from the Harpeth or Cumberland in the summer when the water is low. Also, a rain barrel, combined with simple landscaping to absorb your roof runoff, can protect nearby streams by reducing the stormwater runoff from your property.

RiverSides, located in Toronto, Canada, specializes in rain barrels and other techniques homeowners can do on their property to reduce runoff. Thanks to HRWA’s partnership with RiverSides, you can order a rain barrel through HRWA and, since we’re ordering in bulk, you’ll save drastically on shipping.

Call HRWA at 790-9767 to order your rain barrels today.



- Black (recycled) or Green : \$130 plus shipping and handling.
- Sandstone or Granite: \$160 plus shipping and handling.
- Capacity: 132 gallons will hold several rain events
- Dimensions: 51 inches tall, 30 inches wide, 8-sided.

For details, contact RiverSides at 416-392-1983 or www.riversides.org.



Paul Sloan

Eyes on the Harpeth



What to do in case of a River Emergency

If you see a fish kill of any size, chemicals spilling into any drainage way, or mud coming off a construction site, report it immediately to the TN Department of Environmental Conservation:

Call 1-888-891-TDEC (8332) 24 hours a day

It takes quick action to gather the information to determine the source of the problem and to contain a pollution risk. TDEC and other state agencies have a system to respond, so don't hesitate to call any time of day and leave a message if it is after hours. A quick response is vital to effective law enforcement.

For mud running off construction sites, local governments have regulations on erosion control and stormwater runoff and will respond first. Call:

- City of Franklin, 791-3218**
- City of Brentwood, 371-0080**
- Williamson County, 790-5608**
- Davidson County (for Bellevue): 880-2420**
- City of Dickson 441-9506**

If possible, take a dated photograph, jot down as much detail as possible, and provide it to both TDEC, the local government if appropriate, and to HRWA so we can follow-up!

BE SAFE: Do NOT trespass and do NOT get near any situation involving a chemical spill.

Contact HRWA and send us your information also: (phone/fax) 790-9767, P.O. Box 1127, Franklin, TN 37065, www.harpethriver.org.

Please cut this out and hang it in a visible place!

Mound Bottom: An Archeologist's Treasure

Adapted from *The Harpeth River: A Biography*, by Jim Crutchfield

In Williamson County, on the Old Natchez Trace Road near Montpelier Farms, if you stand near historic Old Town (just upstream from a popular canoe launch location), you can still see faint traces of the prehistoric Temple Mound civilization. If your imagination is vivid enough, you can picture a broad plaza reaching several hundred yards back from where you stand and extending about the same distance on either side.

Directly in front of you are the two temple mounds, each topped by a chief's dwelling or possibly a temple of some kind.

Let's leave our vantage point now and take an imaginary walk around the temple mounds toward the back perimeter of the fortifications. To our right is Brown's Creek with its steep embankments. As we follow the fortifications from the creek around the back side, we marvel at the fine wooden stockade that crowns the earthworks all along the perimeter. From the pains they have taken to fortify their site, it is apparent that the folks we are visiting are well prepared against any outside attack.

As we pass an opening in the stockade on the back side of the enclosure, we can peek through and see the corn and bean fields beyond. As we walk back through the plaza to our original vantage point at what would become Old Natchez Trace hundreds of years later, we pass many individual houses scattered here and there across the broad expanse around the mounds. Hundreds of mound builders live in the village. Farther downstream in what would later become Cheatham County, are two other ancient cities, apparently built by the same civilization.

The Mound Bottom site near Highway 70 is the largest and most complex of all the prehistoric sites along the Harpeth. Indeed, it is one of the largest in the entire

southeastern United States.

Completely encircled by the Harpeth River on all but the western edge of the village, the Mound Bottom village had the additional protection of lying at the base of high, perpendicular cliffs beyond the river on its northern and eastern sides.

A large pyramidal mound surrounded by several smaller mounds, all situated on a broad plaza, made up this town. Living sites were located to the south of the large mound, while the entrance to the town was on the south side of the narrow piece of land formed by the bend of the river.

Why did the Temple Mound civilization disappear? No one knows. Being allied to the other people of the Harpeth River Valley, they probably shared the same fate; i.e., assimilation into other peoples' culture by gradual blending rather than outright conquest.

We can know with certainty only one thing about them: We are not the first to discover that Middle Tennessee is a very special place to live. If we are careful stewards of our natural resources, we can leave the river, its tributaries, and its rich bottomlands to generations as distant in our future as the Temple Mound civilization is in our past.

Franklin resident Jim Crutchfield is the author of over thirty books, including *Franklin: Tennessee's Handsomest Town* and *The Harpeth River: A Biography*. His books are available in local bookstores.



Farm owner Horace Street's pickup gives scale to Platform Mound with Mace Bluff in background. Children in foreground are on the slope of the second largest, older woodland mound. Photo by Mack Pritchard, circa 1968.

A Current Affair: Fishing and Floating the Harpeth

By Vernon Summerlin

The Harpeth has over 100 miles of Class I canoeing with a few Class II rapids. It is a State Scenic River offering a wide variety of fish, including bass, bream, catfish, crappie and stripe. You can expect stream widths ranging from 20 to 50 feet and to occasionally scrape bottom during low water periods.

This is a good stream for beginning canoeists, family floats, and even the experienced paddler looking for fishing variety. The entire fishery gets little pressure except at a few spots easily accessed by pedestrian traffic. From a canoe or johnboat, you can fish waters that rarely see a lure. The average water temperature in June is about 75 degrees.



Stream bass caught by Paul Waynick in Bedford County.

This river has plenty of access points but first be warned to look for and avoid strainers (downed trees and other objects blocking your course). Should you encounter one, the gentle current allows you to negotiate it. Maneuver around it or get out and pull your craft around it.

You can put in on the West Harpeth near Franklin at the Old Highway 96 Bridge and float to the next access at the New Highway 96 Bridge, a distance of six river miles. An additional four miles takes you to the main Harpeth River. It's 11 river miles to the next take out on Old Natchez Trace Road.

You can put in on the main Harpeth in Franklin at Pinkerton Park and float six miles to the Hillsboro Road (US 431) Bridge north of town.

From this bridge to the Old Natchez Trace Road access is 13 miles. These stretches offer catfish, bream, and bass.

The canoe ramp at the US 100 Bridge is 10 miles downstream from the Old Natchez Trace Road access, then three miles to the Old Harding Road Bridge. From Old Harding Road it is six and a half miles to the historic Newsome Mill Park. Smallmouth, largemouth, Kentuckies and rock bass are the main game fish in this stretch. Catfish and bream can be caught in the entire system.

It's a short two-mile paddle to the next access point east of Pegram on US 70 and four river miles into Pegram. The next trek is to Shacklett, about five miles, then another five miles to The Narrows. This float will take you through some wonderful smallmouth waters, with more to come.

The five-mile loop of The Narrows puts you within 200 feet of where you put in. This is a nice lazy float on a summer afternoon, and you only need one automobile for put-in and take-out.

About two miles below the bridge at The Narrows on Cedar Hill Road is the next access. The last bridge is seven miles downstream on Claylick Road. From Claylick Road Bridge there is a 12-mile run of the Harpeth to the TN 49 bridge and the Harpeth River Recreation Area. This last 12 miles has some of the best angling in the river because it's only two miles to the Cumberland River from the recreation area. Stripe, stripers, crappie, and bass move freely up and down this last section of the Harpeth.

Editor's Note: Vernon Summerlin, known for his outdoor writing, also teams up with his wife, Cathy, to write travel books. Their latest is *Traveling Florida* (292 pages, soft cover). For an autographed, postpaid copy send \$20 to Vernon Summerlin, 5550 Boy Scout Road, Franklin, TN 37064. Send \$23 for an autographed, postpaid copy of *The Compleat Tennessee Angler* (400 pages). Last summer Vernon and Cathy launched *Gallivant — Whimsical Travel* magazine for the Franklin-Nashville market.



Vernon Summerlin

Wade into the HRWA and Join the Flow!

You don't have to have a Ph.D. to be a Harpeth River Watershed Association volunteer. All you need is a little time and a lot of love for the creeks and rivers that make Middle Tennessee special! HRWA needs volunteers to do everything from office work to field studies (and we will train you!) to a range of restoration projects. We'll connect you with a committee or local project. **Call HRWA at 790-9767 if you can ...**

- Join the Volunteer River Restoration Corps (VRRRC)
- Organize a fishing derby
- Help with a river festival
- Hand out HRWA brochures
- Be a demonstration site for landscaping options and farm practices that protect water quality
- Be a local coordinator of restoration efforts in your area
- Invite HRWA to speak at your group meeting
- Hold a house party
- Recommend HRWA as a beneficiary of your group's fundraising event—bike races, fun runs, wine tastings, and other fun occasions
- Take photographs that capture the beauty and variety of the Harpeth
- Invite HRWA to speak before the chambers, city council, county commissioners and other groups of decision makers

SPECIAL THANKS

We couldn't do it without your help!

- ◆ **The Walton Family** for donating office space above Walton's Antique and Estate Jewelry
- ◆ **TN Department of Agriculture Nonpoint Source Program—John McClurkan, director, and Susan Primm** (\$50,000 grant in 2002 to launch River Restoration Program and the new \$300,000 two-year grant for watershed restoration, planning, and outreach.)

- ◆ **Mott Foundation**—\$22,500 in total provided through River Network. See www.mottfoundation.org for a story including photos about HRWA and Mott's longstanding support of River Network and river conservation efforts in the Southeast.
- ◆ **River Network**—\$7500 in 2003 to support organizational strengthening and for their terrific consultancy work.
- ◆ **The Frist Foundation**—\$10,850 for two technology grants, 2002 and 2003.
- ◆ **Dr. Dave Wilson—Volunteer Extraordinaire for 2003!** See page 9.
- ◆ **Orrin and John Ingram**—\$10,000 to the HRWA Stewardship Council (page 5) with 3 year pledge.
- ◆ **Franklin Cinema (Joe and Beth Bankemper, owners)** for hosting the 2003 HRWA Annual meeting
- ◆ **Sandy's Grill** for hosting the 2002 HRWA annual meeting.
- ◆ **Blue Ridge Mountain Sports**—donation of gifts for volunteers.
- ◆ **Rebecca Keys**—designed the VRRRC T-shirt for a quick turnaround.
- ◆ **Mike Thomas**—computer systems expertise.
- ◆ **Holly Sherwin**—host for *TN Wildside* segment on the HRWA (see website).
- ◆ **Peter Jordan**—main newsletter editor and keeper of the flame.
- ◆ **Mary Caprio**—fantastic speed on newsletter layout and editing.

Jewish Community held November 2, 2003. Event co-chairs: **Lisa Morrow, Amy Green**. Hosts: **Bill & Sue Snyder**. Sponsors: **South City Baking** in the Franklin Factory; **Image Arts** in Cool Springs; **Bongo Java; REI; West End Klezmer Lidz Band; Williamson Recycles; Cheryl Lane; Shai Cherry; Gotta Bead** of Cool Springs

Technical Advisors:

- ◆ **Terry Horne**—National Resource Conservation Service
- ◆ **Tim Diehl**—US Geological Survey
- ◆ **Jimmy Smith**—TN Dept. of Environment and Conservation
- ◆ **Dave Wilson**—professor emeritus, Vanderbilt University
- ◆ **Mike Corn**—Aquaeter
- ◆ **Rick Lockwood**—Advent Group
- ◆ **John Calligan**—Advent Group

Parks Departments:

- ◆ **Lisa Clayton**, City of Franklin
- ◆ **Amanda Metcalf**, City of Kingston Springs
- ◆ **Dave Bunt**, City of Brentwood
- ◆ **Bob Parish and Rita Bronner**, Metro Parks Department (Warner Parks)

District Conservationists for the Natural Resource Conservation Service (NRCS):

- ◆ **Carolyn Dillard**, Cheatham County
- ◆ **Wynne Mitchell**, Dickson County
- ◆ **Ray Bowers and Vina Winstead**, Williamson County
- ◆ **Larry Robeson**, Rutherford County

Stormwater Coordinators:

- ◆ **Don Green**, City of Franklin
- ◆ **Robert Karesh**, Williamson County
- ◆ **Steve Foster**, City of Brentwood
- ◆ **Michael Hunt**, Metropolitan Nashville-Davidson County
- ◆ **Lee Mathis**, City of Dickson

A portion of the cost to produce this piece was funded under an agreement with the TN Department of Agriculture's Nonpoint Source Program and the US Environmental Protection Agency Assistance Agreement #C9994674-03-0

Revenue and Expense Statement (for year ending Dec. 31, 2002)

INCOME

Government Grants	\$57,000.00
Non-government grants	1,282.12
Foundations	13,500.00
Donations	
Stewardship Council (start 11/03)	9,950.00
Membership	8,195.00
Earned Income	9,990.14
Interest	19.02
Total Income	\$99,936.28

EXPENSES

Staff	\$64,168.78
Professional Fees	19,161.35
Postage	1,659.67
Printing/Copying	3,895.83
Phone	1,216.67
Lab Costs	852.00
Travel and mileage	2,958.88
Supplies-Office	2,585.92
Supplies-Restoration Projects	7,700.75
Conference Fees	95.00
Licenses and Fees	118.00
Dues and Subscriptions	454.30
Food for events/meetings	619.74
Other	113.98
Total Expenses	\$105,600.87

EXCESS OF REVENUE

OVER EXPENSE (\$5,664.59)

Balance Sheet

ASSETS

Cash	\$8,226.43
Furniture and Equipment	\$8,602.31
TOTAL ASSETS	\$16,828.74

LIABILITIES AND EQUITY

Accounts Payable	\$3,800.00
Fund balances	\$13,028.74

TOTAL LIABILITY AND

FUND BALANCE \$16,828.74

Events:

- ◆ **Visions of Nature Preserved 2003: The Harpeth River** held April 25, 2003. Benefiting both the HRWA and the Land Trust for TN. Event Co-chairs: **Margaret Sloan and Lori Canale. Chestnut Group** "plein air" fundraiser. See page 4. Party hosts: **Lin and Bill Andrews**. Guest artist: **Ralph Oberg**. Sponsors: **Waller, Lansden, Dortch & Davis; SunTrust; French, Christianson, Patterson & Davis; UBS/PaineWebber — The Rowland Financial Group; Mailer's Choice.**
- ◆ **Rivers of Righteousness: Lunch-and-Learn Family Picnic** for the

In Appreciation of All Your Efforts ...

The Harpeth River Watershed Association would like to thank the following for their time, attention, and financial support from April 2002 to the present.

ORGANIZATIONS

Aquaeter, Atticus Trust, Black and Veatch, Horatio and Willie Buntin Foundation, Blue Ridge Mountain Sports, Chestnut Group, City of Franklin, City of Kingston Springs, Community Foundation of Middle TN, Cumberland Region Tomorrow, Deborah Craig Family Foundation, Cumberland River Compact, Brownlee Currey Foundation, Environmental Management and Engineering, Inc., Robert and Helen Glaser Foundation, Heritage Foundation of Franklin and Williamson County, Friends of Warner Parks, Growild, Harpeth Quick Print, Institute for Conservation Leadership, ISDN-NET, Jen-Hill Construction, King Family Advised Fund of the Community Foundation of Middle TN, Kingston Construction, The Land Trust for Tennessee, Pam Lewis Foundation, F.E. Lykes Family Foundation, MTSU Geography Department and Mark Abolins, Metro Parks, Natural Resource Conservation Service, The Nature Conservancy of TN, One Source, Inc., Rawlings Foundation, REI, River Network, Southern Alliance for Clean Energy, Southern Environmental Law Center, Stites and Harbison, Southern Land Company, TDA Nonpoint Source Program, The TMA Group, TDEC Water Pollution Control, Tennessee Clean Water Network, TN Wildside, US Geological Survey, Walton's Antique and Estate Jewelry, Williamson County Government, World Wildlife Fund

Stewardship Council Members are UNDERLINED. See page 5.

*** Volunteer River Restoration Corps members are marked with an asterisk.**

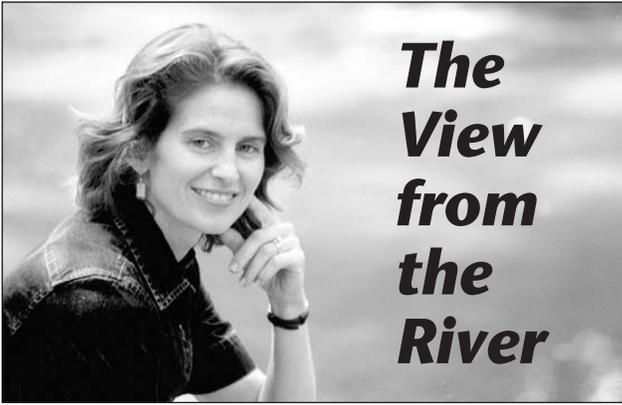
INDIVIDUALS

Kent & Mary Entreklin Agee
Michelle and Jim Alcott
Ray & Shannon Alley *
Joey Anderson *
Paul W. Anderson
Rogers C. Anderson
Valerie Andres *
N.A.C. & Jane Severs Andrews
Scott & Rebecca Andrews
Victor & Suzanne Andrews
Anonymous
Ernest and Nell Bacon
Beth & Joseph Bankemper *
Chris Barberic *
Patrick Barden *
Jeff Barrett *
Leann & Jay Barron
Irene (Renee) Bartnik
Ms. Edie McBride Bass
Pam and Vic Bates
Kenneth Bengé *
Patrick Bentzen *
Rabbi Alexis Berk
Sandy Bivens *
Jared Blade *
Elaine & Steve Blount
Pam and Bob Bolen *
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Mary Buckner and Jack Lyle
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Mr. and Mrs. Barney Byrd
Bonnie & John Cage
Dr. Jim Callaway
Mr. & Mrs. Duncan Callicott

John Callighan
Lisa & John Campbell
Lori and Dan Canale
Frank and Mary Caprio
Dorie Bolze and Claude Carmichael
George H. Cate, Jr.
Laurianne Cates *
Jennifer & Gary Chapman
Robert Christie *
Mary Helen Clarke *
Martin and Laurie Clayton
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5th Grade Class '02-03 *
Jennifer Consiglio *
Keith Cook *
Stuart Cook *
Dwight Corlew
Derric and Page Cotton
Gene & Marnie Cotton
Dixie W. Coutts
El & Debra Cox *
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Deborah Craig
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Mike Cunningham
Mr. & Mrs. Brownlee Currey, Jr.
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Duke Ellis
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Craig & Lorraine Ferrell
David & Monterey Fleet
Kelly Flora *
David & Lisa Fox
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Alexander Lawton
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Calvin Lehev
David & Elizabeth Lemke
Andree & Alan Lequire
Beth & Eric Lewis
Luke Lewis
Pamela Lewis
Matthew and Stacey Ligon
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Will Jordan

It has been just over two years since I became HRWA's first Executive Director. We began with \$1500 in grants and 30 members. Today we have a \$100,000 annual budget, nearly 300 members, three scientific and technically trained staff, over 100 volunteers, and two large multi-year government grants that will put \$400,000 to work in the Harpeth over the next two years. WOW and THANKS! This is because so many people have pitched in from all over the Harpeth, the state, and even the continent! **We have accomplished a lot** — from tackling degraded streams to water pollution policy, more than we can fit into this newsletter, so see our web site too.

This is a clear sign that people care about the Harpeth and about having an organization with the expertise to focus efforts and leverage diverse interests on behalf of river's health. **The large variety of wildlife in the lower half of the Harpeth makes it a globally unique freshwater river system.** We are truly blessed with a natural river system without big dams and concrete channels.

But the future of the Harpeth demands our attention NOW! Development in Williamson County and Bellevue, one of the fastest growing regions of the country, is threatening to drastically harm the health of the Harpeth. Pavement, rooftops, and streams stripped of vegetation are causing flooding, property loss, dried-up streams and tons of mud in the river system. Analysis of growth by Cumberland Region Tomorrow clearly shows that **by 2020, under current patterns, the Harpeth in Williamson County and Bellevue will shift from mostly healthy to seriously degraded and mostly irreversible conditions.**

WE CAN PREVENT THIS! This same analysis shows that we can avoid this if we support local leaders to put approaches in place, especially in land use planning, that both accommodate growth and ensure clean air, clean water, safe drinking water, the long-term health of a globally important natural treasure.

We are creating a collaborative strategy to make this future a reality. **It includes both government policies and what we all do with our own personal part of the Harpeth.** So look inside to see how you can be part of the solution. JOIN the effort! **You truly will make a difference.**

Look Inside & Take Action: We Can All Help the Health of the Harpeth

- ◆ **Get muddy, plant trees, have fun**—Join the Volunteer River Restoration Corps! (pg. 3)
- ◆ **Sign on**—Join HRWA today or renew your membership. Your support is critical. (pg. 4)
- ◆ **Invest in Harpeth River Futures**—Become a Stewardship Council member. (pg. 5)
- ◆ **Read all about it**—See what all the science, including HRWA's own field work, is telling us. (pg. 6)
- ◆ **Be RiverSmart**—Use a rain barrel and follow these other simple steps to make a big difference in local water quality. (pg. 10)
- ◆ **Be a River Watcher**—Learn what to do in case of a River Emergency. (pg. 12)
- ◆ **Explore and enjoy the Harpeth River**—Take a canoe trip, do some fishing, or discover local archeological treasures. (pgs. 12-13)



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