

TVA River Neighbors



Navigation • Flood Control • Power Supply • Land Use • Water Supply • Water Quality • Recreation

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Taking the River's Temperature Around-the-Clock Monitoring Can Yield Big Benefits

It's a little easier than forecasting the weather, but not much. Members of TVA's Hydrothermal Team predict the intake temperatures at TVA coal-fired and nuclear plants.

"Our job is to see that discharges of water from TVA's coal-fired and nuclear plants don't cause temperatures downstream to exceed environmental limits," explains team manager Kathy Lindquist. "We make predictions for the next day or the next week, which we provide to coal-fired and nuclear plant management. Our forecast models are sophisticated enough to be able to pinpoint not only how many cooling towers will be required, but how many pumps will be needed at each cooling tower. We also try to predict situations where we think that more water may be needed from dams upstream or downstream of the plant."

Each of TVA's thermal plants operates under a state permit that specifies water temperature discharge limits. The goal, according to Lindquist, is to protect the health of aquatic life downstream of TVA's coal-fired and nuclear plants. The key concept

is expressed as part of the Clean Water Act, which states that power plant operations must not interfere with the ability to "sustain a balanced indigenous population."

"We do everything we can to keep water temperatures where they need to be," says Lindquist. "At the same time, we also have to meet many other objectives such as power production, navigation, flood damage reduction, and water supply. It's a real balancing act."

Lindquist's team feels the pressure when water temperatures at TVA coal-fired and nuclear plants approach permit limits. "At certain times of the year—particularly during hot, dry weather—it's very difficult

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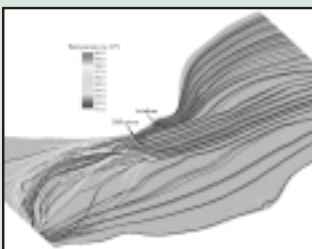
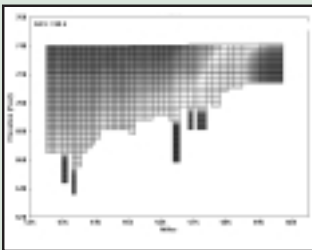
TVA Hydrothermal Team members Kathy Lindquist and Boualem Hadjerioua review model results for water temperatures at Browns Ferry Nuclear Plant.

From the River to the Forecast

Regardless of the type of method used for measuring water temperature, the information has to be collected and processed before it can be used by TVA's Hydrothermal Team.

Each water temperature station contains some type of data acquisition unit, which is accessed by radio, satellite, or telephone. For many stations, a computer contacts the data acquisition unit every 15 minutes or so to retrieve the most recent water temperature readings.

Special software records the water temperature information in files and displays the data in a meaningful way. The output from computer models serves as a basis for water temperature forecasts used by TVA to help protect water quality and aquatic life in areas influenced by the operation of TVA hydro, nuclear, and fossil facilities.



Too Hot, Too Cold, or Just Right River Temperatures Affect Us All

Most people don't give them much thought, but they can cause major concerns if they get out of line. Water temperatures in the Tennessee River system are very important—to anglers, to municipalities operating water treatment plants, to the health of aquatic life, to state regulators, and certainly to TVA. Here are just a few of the reasons why it's so important to keep them where they need to be.

Water quality

Hot, dry weather and high water temperatures can cause problems with algae in some reservoirs, with greenish mats forming on the water's surface. While a certain amount of algae is desirable and beneficial for fish as the basis for the aquatic food chain, an over-abundance is unsightly, odorous, and causes extra expense in terms of treating water which is to be used for drinking.

Fish health

Fish are extremely sensitive to water temperatures. A gradual springtime increase in reservoir temperatures, in fact, is a signal to fish that it's time to spawn. Fish will remain largely inactive until warmer water stimulates their metabolism and prompts them to feed. By the same token, cool-water species such as smallmouth bass, walleye, and sauger can be adversely affected by too-warm water temperatures. It affects their feeding behavior and requires an adjustment in fishing patterns, as every good angler knows. If water temperatures get either too low or too high, fish stop feeding altogether.

Power costs

During extended periods of hot, dry weather, TVA's challenge is to maintain the water temperatures needed to stay in compliance while optimizing power production. When necessary, managers will reduce generation (the term used is "de-rating") to prevent a thermal violation—but it often means having to switch to a more expensive method of generation. During peak periods, TVA might even have to buy power on the "open market" to make up the difference. Such purchases are often very expensive, and can result in increased costs to the power system.

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to maintain the water temperatures needed to stay in compliance. The irony, of course, is that's when electricity demand is the highest and when maximum generating capacity is the most important.

"When things get iffy, we monitor the hourly water temperature data from the automatic sensors at our plants around the clock. We also run computer models to see how alternative water release schedules from our dams would affect compliance, as well as other river objectives. We are in constant contact with the coal-fired and nuclear plants, sharing information and making recommendations to managers—all with the objective of determining the best

overall option for the region in terms of meeting our environmental stewardship goals and providing reliable power."

And there's always the possibility of dealing with the unexpected, says Lindquist. "For instance, a pump goes out



TVA uses a variety of methods to monitor water temperatures in the Tennessee River system, including fixed stations such as the one shown here at Browns Ferry Nuclear Plant.

at a cooling tower. Besides scrambling to get it fixed, we start running models to see what will happen to water temperatures as a result of the temporary loss of this pump. It can get intense, for sure.”

Their hard work seems to be paying off. The Hydrothermal Team (along with TVA’s River Forecast staff) received TVA’s Environmental Excellence of the Year Award for 2002. The award recognized the team’s exemplary environmental performance in the face of unusually difficult drought conditions coupled with critical

peak power demands.

Lindquist is quick to give credit where she feels it’s due: “This is really a great example of how an integrated system works. TVA is constantly comparing options, determining the lowest-cost solution for staying where we need to be in terms of water temperatures. We optimize the system in terms of the health of the river and power production; these goals don’t have to be mutually exclusive. The end result is greater benefits to the public.”



Handling the high water

TVA employees watch water spilling at Fort Loudoun Dam. During and following the heavy rains over Valentine’s Day weekend, TVA’s integrated management of the Tennessee River system helped reduce the flood crest at Chattanooga by 9.3 feet. The flood damage averted was estimated at about \$37 million. In a 96-hour period from February 14 through early morning February 17, the Tennessee Valley received rainfall amounts of up to 10 inches in some areas. Norris, Tims Ford, Cherokee, Douglas, and Fontana were among the reservoirs most affected, with 6- to 17-foot increases in water levels in less than a week.

Water releases from these and other tributary flood-storage reservoirs in the TVA system were minimized to reduce the impact of heavy rains on the main Tennessee River. Spillway releases were required at all dams along the main river during the weekend for flood management. Dams continued to spill as more rain fell the following weekend and at the end of the month.

Now Available:

2002 Monitoring Results

It was just what TVA scientist Tyler Baker expected: “2002 was another record year. We saw the highest chlorophyll levels we’ve seen yet at many locations, and we found an increased volume of water with low dissolved oxygen in some reservoirs.”

TVA monitors these indicators because high chlorophyll levels can cause algal blooms and other water quality problems, and low dissolved oxygen can affect fish and aquatic creatures living on the reservoir bottom.

Although rainfall totals were better than in the past few years, overall rainfall and runoff remained below average for most of the year—especially during the critical summer months. This meant that water remained in most reservoirs longer than usual, allowing time for oxygen to become depleted near the bottom and for algal populations to become established. The result was lower overall ecological health scores for 13 of the 17 reservoirs monitored in 2002 when compared to the long-term average.

Ratings for sediment quality, bottom life, and fish communities—which are less susceptible to weather conditions—were generally consistent with ratings in previous years.

Visit www.tva.com/environment/ecohealth for detailed information on the health of your reservoir.

Reservoir Fill Ahead of Schedule, Thanks to Abundant Spring Rainfall

"This is the best the TVA reservoir system has looked—in terms of being on track for the spring fill—since 1998," says River Forecasting Manager Randy Kerr. "Generally speaking, we got rain when and where we needed it. With the possible exception of Nottely and Hiwassee, all main river and tributary reservoirs should be at or near full summer pool by the first of June."

TVA normally begins filling the reservoirs aggressively by the middle of March. This year, the process began a little earlier than usual—thanks to the heavy rains that fell in late February. The portion of the Valley above Chattanooga saw significant rainfall amounts during the last half of the month, resulting in record-high streamflows.

Then came March. According to Kerr, "it was like somebody suddenly shut off the faucet." Traditionally the wettest month of the year, March 2003 was the seventh driest of record since 1890.

"Luckily, things improved during April," says Kerr, "especially above Chattanooga, where rainfall was 1.8 inches above normal for the month. It's a great feeling to be headed into May with the reservoirs in such good shape."



TVA Reservoir Levels¹

	Observed May 1 Levels	Targeted Summer Pool Levels	
		minimum	maximum
Tributary Reservoirs			
Blue Ridge	1684.3	1682	1687
Boone	1380.8	1382	1382
Chatuge	1923.7	1923	1926
Cherokee	1068.6	1060	1071
Douglas	992.7	990	994
Fontana	1692.2	1693	1703
Hiwassee	1513.1	1515	1521
Normandy	873.6	873	875
Norris	1021.3	1010	1020
Nottely	1769.6	1770	1777
South Holston	1729.1	1721	1729
Tims Ford	885.1	883	888
Watauga	1959.2	1949	1959
Main-River Reservoirs			
Chickamauga	683.0	681.5	682.5
Fort Loudoun/Tellico	812.6	812	813
Guntersville	594.4	594	595
Kentucky	359.5	359	359
Nickajack	633.8	632.5	634
Pickwick	413.0	413	414
Watts Bar	739.9	740	741
Wheeler	555.6	555	556
Wilson	506.9	506.2	507.7

¹ Elevations in feet above mean sea level.

Reservoir Operations Update

Record Power Demand – Bitterly cold temperatures produced record power demands this winter, including an all-time peak-demand of 29,866 megawatts on Friday, January 24. TVA's hydro system played a crucial role in meeting this demand. Water was held in reservoirs on the upper end of the system during the early part of the week. Then, when the arctic air arrived, most main-river hydro plants and some tributary plants operated around-the-clock from Thursday through Saturday. Others, with less water in storage, were on call to run during hours when purchased-power costs were high.

Blue Ridge, Bear Creek Drawdowns – TVA will lower water levels below normal on four reservoirs this fall. Special drawdowns are planned on Blue Ridge, Bear Creek, Little Bear Creek, and Cedar Creek for a variety of maintenance and construction activities. Watch for details in the summer issue of *TVA River Neighbors*, or call TVA at 865-632-6065.

Mosquito Control – TVA began raising and lowering water levels on four main-river reservoirs on May 19 to strand mosquito eggs and larvae on the shoreline. Water levels on Guntersville and Pickwick are raised during the week and lowered on weekends. Levels on Chickamauga and Wheeler are lowered during the week and raised on weekends.

Whitewater Recreation Releases – TVA began providing releases for whitewater recreation on specified days at Ocoee No. 2 Dam in March. Recreational releases resumed at Ocoee No. 3, Apalachia, Wilbur, Tims Ford, and Bear Creek in May. For the latest information on release schedules, visit www.tva.com/river/recreation or call TVA's toll-free information line: 632-2264 in Knoxville, 751-2264 in Chattanooga, 386-2264 in Muscle Shoals, and 800-238-2264 from all other locations. If you are hearing-impaired, call 800-438-2264.

BRINGING BACK THE WHOOPERS

Endangered Cranes Return to Valley Skies

Many years ago, their deep, organ-like calls thundered through the air above the Tennessee Valley; the sound of their passing overhead was compared to “the noise of some great army on the march.”

While their present numbers don't come near approaching the many hundreds of birds that used to comprise a typical migrating flock, endangered whooping cranes appear to be making a comeback—thanks in no small part to an important rest stop on the Tennessee River.

The Hiwassee Wildlife Refuge on TVA's Chickamauga Reservoir provides one particular flock of these cranes with a much-needed stop-over on the way to and from their nesting area in a Wisconsin refuge and their wintering grounds in a salt marsh on Florida's gulf coast. Managed by the Tennessee Wildlife Resources Agency (TWRA), the Hiwassee site provides ideal habitat for the migrating birds to rest and refuel along the 1,200-mile trip.

But the birds don't just happen upon the refuge. They are led there by a determined group of humans who care very much about their future as a species. For the past two years, an intensive collaborative effort by the Whooping Crane Eastern Partnership has been underway to reestablish an Eastern flock of whoopers. The idea is to try to create a backup for the only wild population of whooping cranes: currently around 185 birds which migrate from Canada to Texas and back each year.

Each October, a new generation of young captive-reared whoopers are led southward by “Operation Migration” pilots—costumed to keep the fledglings from imprinting on humans—flying ultralight aircraft. The following spring, the cranes return on their own, monitored by teams on the ground using radio receivers tuned to pick up signals from transmitters attached to the birds' legs.

Crane enthusiasts (they call themselves



JOE DUFF, Operation Migration

“craniacs”) who travel to the Hiwassee Wildlife Refuge each fall are treated to a thrilling sight as the birds pass overhead. After landing, they are secured in a predator-proof enclosure where they feed and rest in preparation for the next leg of their journey. The 2,500-acre area also attracts approximately 10,000 nonendangered sandhill cranes every winter in addition to numerous other species of waterfowl.

If the reintroduction project is successful, scores of whooping cranes will one day arrive at the refuge on their own, having learned the route from their parents and grandparents. (A few of the birds from the 2001 flock have actually already made the trip without human assistance.) The ultimate goal is to introduce enough birds to the flyway to establish a self-sustaining flock containing 125 cranes and at least 25 adult breeding pairs by the year 2020. For now, each season that features a successful assisted migration brings new hope for the eventual recovery of these magnificent birds.

To follow the whooping cranes on their twice-yearly trek, go to www.operationmigration.org for a day-by-day log. For directions to viewing areas at the Hiwassee Wildlife Refuge, call TWRA at 800-262-6704.

About Whoopers

Whooping crane populations declined steadily because of hunting and habitat loss until 1941 when the last migrating flock dwindled to an all-time low of just 15 birds. They have rebounded since, but even now scientists estimate that only a few hundred of them exist.

At between four and five feet in height, they are North America's tallest wading bird. Whoopers typically live to an age of more than 20 years. Adults are white with black wingtips and bare red patches on their heads. They are monogamous and normally pair for life.

A distinctive characteristic of the species is the high-spirited mating dance. Usually one crane will begin leaping into the air, wings flapping and head pointing skyward. Other birds join in before long, often to impress prospective mates, but sometimes (as one observer put it) apparently “just for the joy of being alive and being a crane.”

An Invisible Threat **Discarded Fishing Line**

Discarded fishing line is more than an eyesore; it can be lethal to waterfowl, shore birds, and aquatic life.

Wildlife can easily become entangled in fishing line, affecting the ability of these animals to protect themselves and go about daily activities like feeding. Entanglements generally have a “tourniquet” effect—restricting or cutting off blood flow to appendages. They also create an environment for severe infections that can ultimately lead to death.

The fishing line you discard today will still be around when your grandchildren are adults. Instead of tossing it into the water, just wind it up tightly into a ball and stash it in your pocket until you can dispose of it properly. Do the same if you find discarded fishing line along the shore.



Nine More Marinas Achieve Clean Marina Designation

Five marinas on Norris Reservoir, three marinas on Fort Loudoun Reservoir, and one marina on Pickwick Reservoir are now qualified to fly Clean Marina flags as a result of their actions to minimize boating-related pollution.

The latest marinas to receive Clean Marina designation are Norris Dam Marina in Norris; Mountain Lake Marina in Lake City; Shanghai Resort and Marina in LaFollette; Andersonville Boat Dock and Stardust Marina/Harbour Club in Andersonville; Concord Marina and Louisville Landing Marina near Knoxville; Fort Loudoun Dam Marina in Lenoir City; and Aqua Yacht Harbor in Iuka.

These marinas have gone beyond what is required by law, according to TVA Clean Marina Coordinator Linda Harris. “Not only do they meet all federal, state, and local regulations related to marina management.

They’ve voluntarily adopted a variety of practices to minimize the effects of boating traffic on water quality, such as better fuel handling, solid waste disposal and recycling, erosion control, and public outreach and education.”

A total of 12 marinas in TVA’s seven-state region (10 in Tennessee and one each in Alabama and Mississippi) have achieved Clean Marina designation, and nine other marinas are currently working to achieve this goal by the end of the 2003 boating season.

Harris hopes that the flags flying at these marinas will remind boaters to be responsible stewards of the waterway. “The small extra efforts and expenses required to practice clean boating make sense for our families’ health and safety, for the environment, and for the future of recreational boating.”



Pump-out boats such as this one on Norris Reservoir are a convenient alternative to fixed-point waste collection systems.



TAKING CLEAN WATER PERSONALLY

Tips for Clean Boating

So you spill a few ounces of gas into the water when you top off your boat. No big deal, right?

Maybe not if everyone else is more careful. But multiply your relatively small spill by the number of boats in a busy marina and the number of boating days per year, and it can add up to big water quality problems.

“It’s important for us to realize the impact of our combined actions on the condition of our reservoirs,” says TVA Clean Marina Coordinator Linda Harris. “Small impacts add up. But so do small improvement efforts. Our reservoirs can become cleaner starting with just one boat at a time.”

Many routine tasks—from boat maintenance to operation and housekeeping—affect water quality, according to Harris. “Sometimes it is as simple as doing things a little differently.”

Here are some ways to reduce the environmental hazards connected with boating:

At the dock

- Whenever possible, do repairs and painting away from the water. Use a drop cloth to catch paint chips, dust, and other residue when sanding or scraping.
- Reduce your need for heavy-duty cleansers by rinsing your boat with fresh water after each use. Wash your boat with phosphate-free and nontoxic soaps; natural cleansers like baking soda, vinegar, and borax; and old-fashioned “elbow grease.”
- Be careful when fueling. Leave 10 percent of the tank empty for fuel to expand. Hold an oil-absorbent pad under the nozzle ready to capture any spills.
- Check your bilge water before pumping. If it has a sheen to it, clean your bilge using oil-absorbent materials (such as bilge pillows and engine pan pads).
- Use shore-side restrooms and pump-out facilities.

Underway

- Never discharge sewage—treated or untreated—in no-discharge waterways; use pump-out facilities instead.
- You may release sewage in discharge waters—provided it has been treated by a properly functioning, Coast Guard-certified Type I or II Marine Sanitation Device.
- Keep trash from blowing overboard; store it for proper disposal back at the dock.
- Keep wakes down in shallow areas or near shore to prevent erosion.

TVA Launches Web Site for Kids

It’s colorful. It’s cool. It’s just for kids. The newest addition to TVA’s Web site, TVAkids.com, invites youngsters to learn about how electricity is made, how the Tennessee River is managed for multiple benefits, how protection of water and wildlife is built into TVA’s watershed approach, and much more.

“The addition of a Web site devoted to children helps TVA reach our future stakeholders across the Tennessee Valley,” said TVA Chairman Glenn L. McCullough, Jr. “TVAkids.com provides children and educators with helpful information about the mission of TVA, the importance of our work, and the history that has brought us here.”

The site is geared toward children in the fourth through eighth grades. It includes a section for teachers with curriculum plans that can be downloaded for classroom use and information about TVA’s educational programs.



To access the new Web site, visit www.tvakids.com.

New on TVA.com

26a Permit Information

There's a new place to go for information if you're thinking about building a boat dock, beginning a shoreline stabilization project, or removing vegetation on TVA property. Information about applying for shoreline construction permits along the Tennessee River and its tributaries is now available online at www.tva.com/river/26apermits.

The site provides extensive information on the application process and includes a printable application form, sample project drawings, and a list of TVA contacts.

Section 26a of the TVA Act governs both the type and location of construction projects and applies to any waterfront facility or activity that affects the river or TVA property.

For more information, contact your local Watershed Team office.

For All the Right Reasons Use Native Plants in Your Shoreline Landscape

It's an attractive solution to an all-too-common problem. The use of native plants in your waterfront landscape plan offers an effective, environmentally sound way to help prevent erosion and keep harmful pollutants from reaching reservoirs.

"Streambanks and shorelines are ecologically sensitive areas," explains TVA's Buff Crosby, Senior Manager, Watershed Operations. "These areas are easily damaged and slow to recover, so it's important to protect them."

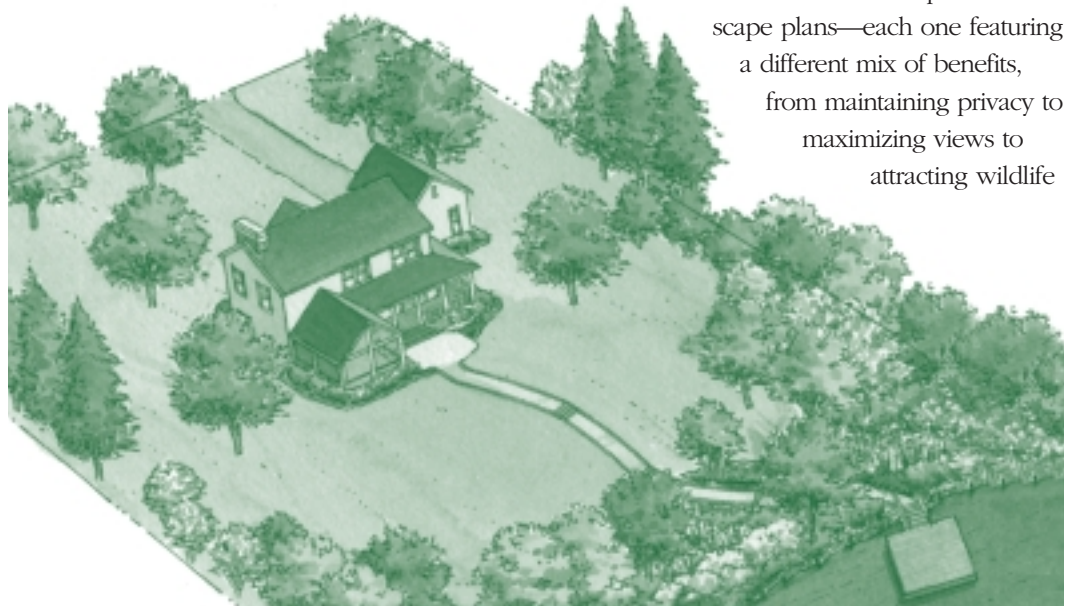
TVA has always been interested in working with property owners who want to create a more natural condition along the shoreline, says Crosby, and now the idea is really catching on. "Our Watershed Teams are getting more and more calls from property owners interested in using native plants in shoreline landscaping—and it's no wonder. Natives offer so many advantages."

Because native grasses, shrubs, and trees are adapted to local conditions, they are easier to grow. They generally require less maintenance and fewer fertilizers or pesticides. They have deep root structures that help to hold soils in place, and they offer a variety of environmental benefits—from protecting water quality and enhancing wildlife habitat to preserving the region's botanical heritage.

The good news is that landscaping with natives is now easier than ever. Native plants are increasingly available at nurseries throughout the Valley, and TVA Watershed Teams are available to assist you. A good first step, says Crosby, is to call your local Watershed Team office for a copy of TVA's new "riparian restoration" fact sheets. "These fact sheets are hot off the press, and I think they'll be invaluable to shoreline property owners. It's easy to be overwhelmed by the idea of redesigning your shoreline or streambank landscape. So much of the information available on this subject is technical in nature and may not apply to your situation. But our new fact sheets are easy to understand and specifically tailored to the seven-state Tennessee Valley region."

The series includes 11 fact sheets on a variety of topics, including general information on the importance of the riparian zone (the biologically distinctive area at the water's edge), the benefits of using native vegetation and how to select varieties that are suitable for your area's climate and soil, specific suggestions about how to assess your property prior to developing a landscape plan, and a discussion of various shoreline stabilization techniques.

The fact sheets also include photographs and illustrations of sample landscape plans—each one featuring a different mix of benefits, from maintaining privacy to maximizing views to attracting wildlife



to preventing soil loss. “For property owners who may be used to maintaining a turf-grass lawn all the way to the water’s edge, it’s important to be able to visualize just how attractive a riparian zone featuring native trees and shrubs can be,” says Crosby. “The fact sheets show a variety of landscape plans that could be implemented for a single piece of property. It’s a good way for people to get an idea of the alternatives that are available to them.”

She says the fact sheet series seeks to emphasize several key messages: “We want to raise awareness among property owners when it comes to the benefits of establishing healthy riparian zones. We want to spread the word that native plants are better than exotics for this purpose. We want to dispel some of the myths people may have about waterfront vegetation.



For copies of TVA's new riparian restoration fact sheets, visit www.tva.com/river/landandshore, or contact your local Watershed Team office.

Finally, we want to help folks understand the need to address the causes of erosion—not to just concentrate on repairing the damage.”

TVA Watershed Teams

Boone, Bristol Projects, Fort Patrick Henry, South Holston, Watauga, Wilbur:
423-239-2000

Cherokee, Douglas, Nolichucky:
865-632-3791

Norris:
865-632-1539

Melton Hill, Watts Bar, Great Falls:
865-988-2440

Fontana, Fort Loudoun, Tellico:
865-988-2420

Apalachia, Blue Ridge, Chatuge, Hiwassee, Nottely, Ocoee 1, 2, 3:
828-837-7395

Chickamauga, Nickajack:
423-697-6006

Guntersville:
256-571-4280

Wheeler, Tims Ford, Normandy:
256-386-3782

Pickwick, Wilson, Bear Creek Projects:
256-386-2228

Kentucky, Beech River Project:
731-641-2000



Controlling Invasives

Before you plant native grasses, shrubs, and trees along your shoreline or streambank, you may need to spend some time removing less desirable plants.

Biologists refer to them as “invasive exotic plant species,” and they are a real threat to the biodiversity of the Tennessee Valley. In most cases, they were planted in backyards bordering the reservoir shoreline many years ago—back when nobody thought very much about what might happen when an exotic plant was introduced into the landscape. But as time passed, many of these exotics “took over,” spreading from the areas in which they were originally planted. Resistant to disease or in the absence of predation, they out-competed native plants that are generally held in check by such natural controls.

Chief on the list of invasive plants is kudzu—that ubiquitous vine that seems to be slowly covering the Southern landscape. But there are plenty of other species that are spreading rapidly throughout our region, including multiflora rose, privet, Japanese honeysuckle, tree-of-heaven, and princess tree.

Shoreline property owners have an important role to play in helping to control these and other invasive species because exotic plant concentrations are so high along the water’s edge—about 40 times higher than in upland areas. These opportunistic species often spread by water. Their seeds float downstream to new locations where they capitalize on the space for new growth created by frequent flooding and thrive in the nutrient-rich soil.



Kudzu

If invasive exotics have taken hold on your property, the best thing you can do is to remove them by hand, leaving the root system intact. Vigilance is required, however, since re-sprouting may occur. Herbicides also are available, although care must be used in their application to avoid killing nearby native plants or allowing chemicals to enter the water. The best advice to property owners interested in helping to prevent the spread of invasive plants is to plant native grasses, trees, and shrubs.

For information about the control and eradication of specific invasive species, view the *Tennessee Exotic Plant Management Manual* online at <http://www.tn-eppc.org/>. You can also contact your local TVA Watershed Team, the Natural Resources Conservation Service, or your local Agricultural Extension Service.

An Angler's Dream Job Their "Office" Is the Lake

Spring Sportfish Survey

TVA fisheries biologists are currently checking black bass, bluegill, and crappie populations in the Tennessee River.

Wheeler, Chickamauga, and Nickajack Reservoirs were sampled in March; Guntersville, Pickwick, Watts Bar, Fort Loudoun, Melton Hill, Tims Ford, and Normandy were sampled in April; and Wilson, Kentucky, Douglas, and Bear Creek projects were sampled in May.

Local anglers often observe the surveys, which consist of 12 electrofishing runs, each lasting 30 minutes, along stretches of shoreline selected to represent diverse habitat conditions. Fish are collected in nets, then counted, weighed, and measured before being released unharmed.

Survey results are used by state agencies to protect and improve sportfishing. A summary will be available on TVA's Web site at www.tva.com/environment/water in September 2003. Results from previous years and more information on the survey procedure are available on the site now.



Al Brown is shown holding a couple of largemouth bass while Donny Lowery enters length and weight information into a data-logging device. The TVA reservoir monitoring crew chiefs are conducting sampling on Chickamauga Reservoir as part of the Spring Sportfish Survey.

It's a lucky man that can combine his hobby with his profession, and Donny Lowery and Al Brown are lucky men. They've got the kind of job that sportfishing enthusiasts dream about.

As reservoir monitoring crew chiefs for the Tennessee Valley Authority, they're often out on the water five days a week, officially—then usually every weekend, just for fun. They may be sampling fish communities using electrofishing boats, demonstrating how to collect fish in a seine net to a group of 5th-graders on a streambank, comparing fish population reports with biologists from various state agencies, speaking to bass club members on ways to handle fish during a tournament—or maybe just swapping a few fish tales.

Active fisheries biologists, the two have impressive professional credentials and over 50 years of experience between them. Donny heads TVA's innovative

Spring Sportfish Survey, and, according to Al, "has a unique understanding of relationships between sport fish and aquatic vegetation." Al has primary responsibility for evaluating reservoir fish health and community structures. "He developed the protocol for assessing reservoir fish communities," says Donny, "and other regional agencies call on him regularly for his opinions and expertise."

But aside from their chosen vocation, Al and Donny are avid anglers. They can talk crankbaits and jigs as easily as they can discuss biomass and diversity. Based in Muscle Shoals, Alabama, Donny is unqualified in his praise for Guntersville Lake as THE place to go for large numbers of big bass. Al operates out of Norris, Tennessee, and likes to fish on Watts Bar. "Of course," he concedes, "if I lived down there, Guntersville would be my favorite, too!" Both men also enjoy fishing on Wheeler reservoir and point to Pickwick

as one of the country's premier small-mouth bass fisheries.

Al fishes in regional bass tournaments all across the South, and says he gets a lot of grief from other anglers who seem to think that his job gives him an unfair edge in competition: "Then after they see my winnings, they leave me alone." He maintains that his only advantage is a confidence level acquired through many years of experience. "I know that the fish are out there!"

Donny agrees, adding that successful anglers are those who have learned how to "pattern" these fish: "Turbidity, water levels, temperature, weather—all those factors affect where the fish are going to be. That's part of what makes this job so much fun for me. There are so many variables in the aquatic environment. Nothing is ever predictable." He especially enjoys meeting the dedicated bass club fishermen who come out to water TVA's Spring Sportfish Surveys. "It's interesting to see their reactions after observing our electrofishing

results in areas where they commonly fish!"

According to Al, a lot of changes have occurred over the past 20 years. "Not only have we developed our science tremendously, but we've also seen anglers start to 'take ownership' of the fishery resource—becoming educated about it, contributing time and money, and taking an active part in water resource protection and enhancement." Both men see improved communication with the public as the key to continued success and have worked hard to develop good relationships with members of the sport-fishing community.

Spend a few minutes with these guys, and it's obvious that they get along well, both professionally and personally. They're quick to sing the other's praises (at least when they're not within earshot of each other), with one notable exception. After all's said and done, Donny makes sure we're clear on one salient point: "When Al and I go fishing together, I always beat him. I catch more fish, and I catch bigger fish. You tell him I said that."

Boat Smart. Boat Safe.

That's the slogan of this year's North American Safe Boating Campaign—and good advice!

With more boats on the water each year and more boats being operated by novices, safety becomes more important each boating season.

"People go boating to relax," says TVA's Ron Riberich, president of the National Water Safety Congress. "But if you're the operator of the boat, you've got to pay attention at all times. The majority of accidents on our waters are caused by operator error."

Here are some simple "dos and don'ts" for a safe summer on the water:

- Keep a constant eye out for other boats, especially personal watercraft, which are easy to miss because of their low profile and quick acceleration.
- Never mix alcohol and boating.
- Always wear a life jacket.
- Don't stand in a small boat.
- Observe the nautical rules-of-the-road. Make sure you have the right-of-way and hold your course and speed when you are being passed.
- Avoid overloading your boat.
- Check the weather forecast before getting underway.



TVA Campgrounds

TVA-operated campgrounds on reservoirs throughout the Tennessee Valley are open for the 2003 season.

Camping fees are \$16 per day for sites with water and electric hookups and \$12 per day for sites without hookups. Golden Age and Golden Access Passport holders receive a 50-percent discount. The passports can be purchased at the campgrounds on Norris, Normandy, and Wheeler reservoirs and at Foster Falls. They're also sold at TVA watershed offices.

Picnic pavilions are available at 16 TVA dams and recreation areas. They can be reserved by calling toll free 866-494-7186. The fee is \$50. Day-use areas and boat launch ramps managed by TVA are available at no cost to the public.

For more information about recreation opportunities on TVA reservoirs, visit www.tva.com/river/recreation, contact your local TVA watershed office, or write to TVA Recreation Areas, P.O. Box 1589, Norris, TN 37828.



TVA River Neighbors is published three times a year for people who live near and use the Tennessee River, its tributaries, and reservoirs.

Send comments and suggestions to Editor, TVA River Neighbors, 400 West Summit Hill Drive, WT 10D, Knoxville, TN 37902.

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Progress Continues Reservoir Operations Study Update

Analysis of alternatives to TVA's existing reservoir operating policies is nearing completion, according to David Nye, project manager for TVA's Reservoir Operations Study. "Teams of nationally recognized experts from across the country are finishing up their work now. We've worked together to develop computer models, which we're using to quantify the effects of alternative operating policies on recreation, water quality, economic development and other benefit areas deemed important by the public during scoping. These effects are then compared to the effects of our existing policies on the same benefit areas."

It's taken months and months of hard work, says Nye, but he's confident about the payoff: "The kind of exhaustive and stringent analysis we've conducted will allow us to make an informed, fact-based, and fully researched recommendation."

This recommendation will be documented in a draft Environmental Impact Statement, scheduled for release later this summer. The public will be asked to provide input at Valley-wide community workshops planned for late July and August.

