

Life on the Lakes

Information About Lakes Hamilton & Catherine

Stand Up & Be Counted

Well, you don't really need to stand...but you will be counted. This summer brings to the lakes another chance for Entergy Arkansas, Inc., to get out and evaluate usage of lakes Hamilton and Catherine.

Several times throughout this coming summer we will have field workers visit boat launching areas to count vehicles, vessels and people. We will also be flying over the lakes to calculate boating density and to categorize uses of the natural resource we like to call home - lakes Hamilton and Catherine.

This activity, also known as the Form 80 Recreation Study, takes place every six years and is a mandated part of our license with the Federal Energy Regulatory Commission. The federal government, as well as Entergy



Arkansas, is interested in getting usage numbers to help plan for the lakes' future. While it is nearly impossible to

manage the lakes in a way that pleases everyone, we do our best to accommodate as many diverse uses and experiences as we can.

But, even if it were not mandated, we are still interested in learning how boating density and the variety of activities on the lakes affect the overall experience of lake users. We use the results of these studies to help determine boating density, usage classification and overall shoreline management. Look for a report on the change in usage from 2002 – 2008 in our '09 spring Life on the Lakes newsletter.



June 2008

- Garvan Woodland Gardens -

Colorful Landscapes, Architectural Marvels



In its sixth year of operation as a public garden, Garvan Woodland Gardens, located on 4 ½ miles of Lake Hamilton shoreline, has become one of Hot Springs' most visited attractions, as well as a popular learning facility for subjects relating to horticulture, environmental science, and landscape design.

As a department of the University of Arkansas School of Architecture, it has become more than just a flowering

botanical experience. It's home to numerous architectural landmarks, including a stunning open-air redwood and sandstone pavilion, designed by the late E. Fay Jones, internationally acclaimed architect of Fayetteville, AR.

Other astonishing architectural features include the Anthony Chapel, a magnificent wood and glass six-story structure set in a picturesque garden. It is the focal point in a complex that includes three other structures. Those structures include a 59-foot copper-clad electronic bell tower, Millsap Bride's Hall and Evans Grooms' Quarters, both of which provide the bride, groom, and their respective attendants a comfortable place to change and prepare for the ceremony.

In addition to the Gardens' inspiring structures, visitors can also observe thousands of natural and exotic plants, hundreds of animal species, and some of the most beautiful landscape in Arkansas. Verna C. Garvan, the CEO of a successful brick manufacturing plant in Malvern, cultivated the garden for more than four decades before donating the property to the University in 1985. Her goal and lifelong dream was to develop the acreage into a world-class botanical garden dedicated to preservation in the 20th Century.

Garden visitors can sit peacefully on one of the many teak benches at the Ellipse or on the stone benches in Serenity Circle. The Millsap Canopy Bridge, a splendid 120-foot long serpentine wood bridge, is the highlight of Singing Springs Gorge. The bridge, designed on the back of a cocktail napkin by its creator Bob Byers, reaches two stories high at its tallest point and overlooks a waterfall that gracefully meanders under the bridge and along a stream into Lake Hamilton.



(Cont. page 5)

The Cost of a Unique Opportunity: Update

In the "Life on the Lakes" newsletter last fall, we explained that Entergy Arkansas Inc. was considering charging an annual fee for lakefront property owners with docks. This was an idea that would help Entergy Arkansas recover more of the cost of its overall shoreline permitting program. Currently, we charge only a one-time permit processing fee for a lake facility or activity like a boat dock or seawall. The current fee structure covers only about a quarter of the costs associated with administering the shoreline permitting program.



After careful con-

sideration, we have decided not to begin charging annual fees at this time. However, we are now considering an increase in our one-time permit processing fees to help recover the part of our costs directly related to processing applications. We appreciate all the comments received that assisted us in making this decision.

When the new fee structure is decided we will publish the new costs in the permit application packets and a future newsletter. Watch for new changes in the "Permit Fee Schedule" of our permit application packets.

Want the Latest Lake News?

Go to www.entergy.com/hydro and subscribe to our Email service. Once fully functional, we will be using this to share important information concerning lake related information such as: safety related issues, permitting information, drawdown and refill schedules, generation plans, emergency weather related drawdowns, policy changes and other time sensitive information.



Lets All Work Together for a Cleaner Lake

The Hot Springs/Malvern area is fortunate to have an abundance of natural resources. Lake Hamilton and Lake Catherine provide the Diamond Lakes area and the people of Arkansas a premier residential and recreational resource. Everyone that uses lakes Hamilton and Catherine has a responsibility to help keep this wonderful natural resource clean and safe so future generations can continue to enjoy.

It will take a team effort from everyone to maintain and protect the scenic and recreational value of lakes Hamilton & Catherine. Though Entergy



Arkansas, Inc. owns the lakebed and shoreline, the waters of these lakes are owned by the state.

There are many opportunities for all of us to reduce the amount of unsightly litter and debris on our lakes. Entergy Arkansas will continue to be a major player in sponsoring and working with local entities and participating in public cleanups. There are opportunities for the public to also help through these same community-wide cleanup initiatives.

- **Adopt a Shoreline:** Twelve miles of shoreline have been adopted by various groups of lake front property owners under Garland County/Hot Springs Beautification Commission's program. More shoreline is waiting to be adopted, maybe by you.

- **Cash for Trash Bash:** In the spring, prior to the refill of the lakes from the winter drawdown, this event is where organized civic groups can clean up the exposed lake bed and obtain cash for their organization.

- **Trash Bash:** This public cleanup is held in September each year, offering the general public the opportunity to participate in a shoreline group cleanup effort. During this event, participants' efforts are awarded with a free luncheon with entertainment and prizes.

Finally, we strongly encourage all lakefront property owners and boaters to do what you can to prevent debris from getting in the lake in the first place.

- Bag and properly dispose of grass and leaf clippings, items and debris left on the shoreline in the winter, and pieces of docks that have fallen into disrepair.

- When boating on any of the lakes in the Hot Springs area, be sure that trash does not blow out of your boat. Take a trash bag with you.

- Periodically inspect your dock's floatation to be sure that it is properly secured and will not float out into the lake.

As long as we continue to pull together, we can protect the environmental integrity and recreational values of our lakes. It takes a commitment from all of us - citizens, business owners, property owners, lake users, local governments, regulators and Entergy Arkansas - to ensure that we continue to enjoy this premier recreational resource that hydropower has provided.



If you would like more information on how you can participate in one of the lake's cleanup efforts, call Blake Hogue with Entergy Arkansas at 501-844-2148 or Adam Roberts with Hot Springs/Garland County Beautification Commission at 501-623-7871 or e-mail cashfortrash@msn.com.

Preparing for Heavy Rain and High Water

During the heavy rains this spring, several docks and other large objects floated free from the shoreline. Several even passed through the open spillway at Remmel Dam. Unlike Lake Ouachita, lakes Catherine and Hamilton were not designed for flood control, meaning they can take on only a limited amount of water before having to release it downstream. They were built in the '20s and '30s specifically for hydroelectric purposes.

When heavy rains come, lake levels can rise very quickly and Entergy Arkansas, Inc. has no choice but to pass water downstream through the spillway gates to prevent the lake from overtopping the dam. When the spillway gates are open, there can be a very strong current near the dams and the heavy rains can cause the water levels to rise in back of coves and main tributaries.

To prepare for heavy flows, be sure to anchor your dock to the shoreline with a strong cable or it might just float away! Also, make sure your floating dock or your boat in a fixed dock is able to rise and fall with the lake.

When Entergy Arkansas, Inc. gets a forecast for potentially flood-producing rains, we may drop the lake by one or two feet just before the storm hits as a precaution. Even this small drawdown can sometimes buy us just a little more time and help us to keep the lake from rising to disruptive levels.

Historic lake levels as measured at the dam have exceeded 404 on Lake Hamilton and 317 on Lake Catherine. Fortunately, we have not seen the water this high in some years. But if some of the rainfall that we were forecasted to receive this spring had actually occurred, we very well could have. And you never know what the future holds. Keep an eye on the forecast, and be sure that all your facilities are secure and well-anchored.



Life on the Lakes Includes Debris in the Lakes

It's that time of year: spring is in the air ... and debris is in the lakes.

When boating, take extra care to watch out for logs, trees, and even pieces of disintegrating docks floating in the lake or lodged in shallow areas. Those who have been around this area for a few seasons have come to expect a springtime increase in the amount of both natural and manmade items floating in lakes Hamilton and Catherine.

This is a combination of two things. First, a natural increase in rainfall washes trees and such from the tributaries into the lakes. Second, with the annual refilling of the lakes, some items that had been resting on the temporarily exposed shoreline in winter become floating obstacles in the water instead. This year extra-heavy rains increased the amount of natural debris. So, the bad news is there has been somewhat more debris in the lakes lately than there usually is in the spring. The good news is that it's well within the realm of normal, and the better news is that, for the most part, this is a problem that generally takes care of itself as floating natural debris either sinks or flows downstream. Still, there's a valid question that needs to be discussed: Some of the debris needs to be disposed of by people. Whose job is it to do that? The short answer is: It's everybody's job. But there is also a longer answer.

First, Entergy Arkansas, Inc., owns and operates Carpenter and Remmel Dams and the related shorelines and lakebeds, though not the water itself. The state of Arkansas owns the actual water. So, it's reasonable to ask what Entergy Arkansas' responsibilities are for debris removal.

The Federal Energy Regulatory Commission, by whose authority Entergy Arkansas operates the hydroelectric project, says, essentially, that the company's responsibility is limited to hazards associated with the hydroelectric generation facilities themselves, and that hazards elsewhere in the lakes would be better left to "local entities and law enforcement agencies." Arkansas law regarding recreational land similarly absolves Entergy Arkansas and other owners of property available to the public for recreational purposes from responsibility for removing naturally occurring potential safety hazards from the property.



That said, Entergy Arkansas has always gone the extra mile to be a good neighbor and help take care of the lakes that, after all, are our home, too. We actually started the highly successful Trash Bash program in 1999 and are a major player every year now that it is under the excellent leadership of the Trash Bash Council, Inc. a non-profit incorporation and its partnering organization, Hot Springs/Garland County Beautification Commission. In fact, our lakes and property coordinator, Blake Hogue serves on both boards of directors.

We do write and enforce the rules about shoreline development, docks in particular. For instance, in 1992, Entergy Arkansas announced an eight-year phase-out of white beaded floatation in favor of plastic encapsulated floatation instead. This material had been the No. 1 offender as unsightly debris for a long time. We are now in year eight since the material has been banned entirely, and improvement has been dramatic. *(Cont. page 4)*

Life on the Lake's Quick Bits

Did you know...

That Lakes Hamilton and Catherine, have a combined watershed of 1,516 square miles (that's more than 2x the size of Garland County). Any water that falls within that watershed has the chance of eventually ending up in one or both of the Lakes. That means that more than just the empty soda bottles on the side of the road can end up polluting our local waters.

Luckily there are several simple steps you can take to help protect them.

- **Practice Lake Friendly Lawn care** - Minimize fertilization and pesticide applications on your yards, and NEVER apply just before a rainfall. Excess nutrients and chemicals will eventually run off into the lakes potentially causing increases in vegetation growth and or harm the fish, their food sources and oxygen supply. TIP: get your soil tested to determine the most efficient fertilization needed or use organic compost – like that found at the City compost pile.
- **Remember “Only Rain in the Drain”** - Storm drains are an essential water control device that empty directly into the Lakes – so please remember to protect these water flow superhighways.
- **Properly dispose of Grease, Dirt and Soap** – You wouldn't pour these directly into the lake would you? But you are if you wash your car where the water will runoff into a storm drain. TIP: Wash it on the lawn where grass will be able to soak up the soapy, dirty water preventing it from directly entering the Lakes.

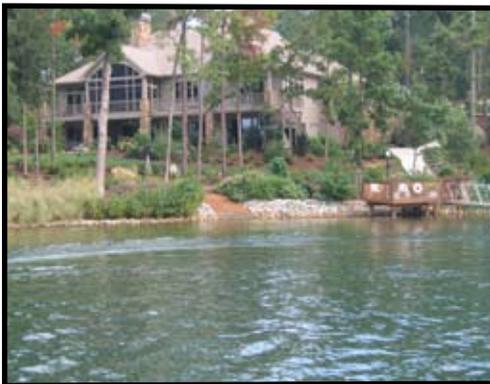
- **Create a Buffer Zone** - Plant a native vegetation buffer between your yard and the shoreline to filter out chemicals and slow water run off.

- **Plant Green** - Choose earth friendly landscaping with hardy native plants that require less water and chemicals. TIP: Plant a rain garden to utilize natural water sources. (www.gardeners.com).

- **Build Green** - Install wood decking, or bricks/stones instead of impervious cement to allow water to filter into the ground. TIP: Gravel trenches along driveways and patios also help to collect water and filter it into the ground.

- **Get Active** – Volunteer in local clean up activities and encourage local officials to develop erosion and sediment control ordinances. TIP: Make sure to use filtering structures like silt fences during construction.

Information was collected and used from the following sources - www.eps.gov, www.macom-mi.gov, www.plslwd.org/what_you_can_do.htm.



Debris... (cont. from page 3)

As a measure of goodwill, Entergy Arkansas, when requested, may arrange to collect large logs by land from the lakefront or a boat ramp of a consenting property owner. A large log would typically be one that is bigger than 10" diameter and longer than 25 ft. Typically, this will occur by a request from a lakefront property owner to dispose of a large tree that they cannot dispose of by normal means. If they can arrange to move the log to an area of shoreline accessible by land, we will send a contractor to dispose of it with the landowner's permission.

Cash for Trash Bash, another Success

Problem: How do you get eight volunteer civic organizations to pick up four tons of garbage from littered areas of lakebed and shoreline with snow on the ground?

Answer: You pay their organizations \$5 for every bag of trash they collect.

The non-profit organization Trash Bash Council, Inc., in conjunction with Hot Springs/Garland County Beautiful Commission organized the 2nd annual “Cash for Trash Bash” event to do some spring cleaning of the exposed lakebed and shoreline. On March 8th, before the lakes were refilled and the heavy spring rains came, about four tons of litter and trash was collected from the lakes by local volunteer organizations.

The funding for this event came from an environmental grant program sponsored by Entergy Arkansas, Inc. Cash for Trash Bash is a very efficient way to do a volunteer lake cleanup. Trash Bash Council, Inc. found eight local organizations looking for fundraising opportunities, and assigned them targeted areas of the lake that were exceptionally littered.

This year the organizations collecting trash and cash were: First United Methodist Church Youth Group, Piney Baptist Youth Group, Spa City Junior Bass Hunters, Spa City Bass Club, Wilson Lake Neighborhood Beautification Association, Lakeside Baseball Association, Hot Springs Alcoa Lightning, and Arkansas Diamond Hogs. These groups did a great job! For their efforts they received donations up to \$200 from Trash Bash, Inc. to help support their organizations. Some of the groups also solicited additional donations from other sponsors who wanted to show appreciation for the cleanup.

The next great clean-up event will be TRASH BASH, on the morning of Saturday, September 13th. This is the largest single day clean-up operation in Arkansas. It involves lake and road clean-up operations throughout the area and brings together up to 700 volunteers to pitch in. Following the morning cleanup, participants enjoy a free appreciation picnic with music and prizes at Garvan Woodland Gardens.

If you would like to support Trash Bash, Inc. or you belong to an organization that might be interested in participating in a similar program next year or just want more information, call Adam Roberts at 501-623-7871 or e-mail cashfortrash@msn.com.



Garvan Gardens (cont. page 1)

The 44-acre Hixson Family Nature Preserve offers visitors several wide-angle views of Lake Hamilton that are both scenic and tranquil. Birdsong Trail, the nature preserve's primary path, hugs the shoreline and allows walkers to share the natural habitat of over 80 different species of birds, including the pileated woodpecker, the tufted titmouse and, in the winter months, bald eagles.

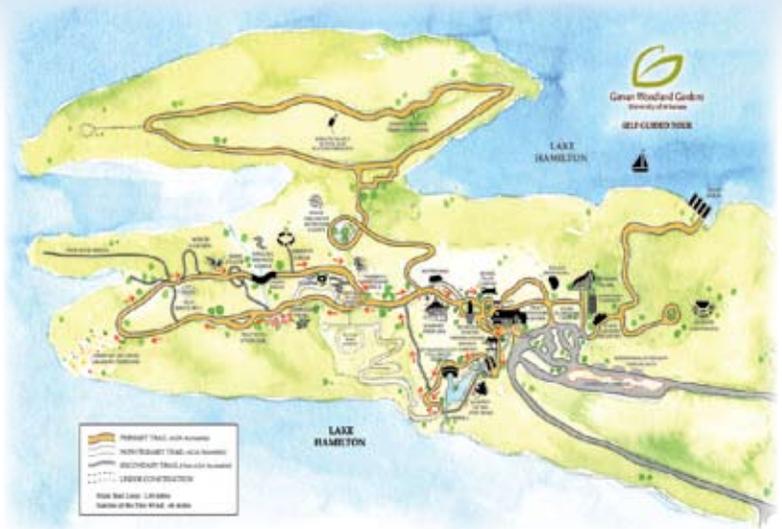
Each season is unique in the garden. Spring brings forth a kaleidoscope of colors as far as the eye can see. More than 150,000 daffodils are followed immediately by a magnificent tulip display featuring 93,000 multi-colored blooms. Guests will also be enchanted with the blaze of red and pink azaleas and thousands of pink and white-blossomed dogwood trees that dot the landscape.

In the fall, the Gardens come alive with color when 65 different varieties of Asian maples make their seasonal change. David Slawson, a nationally recognized expert in Asian art and garden design, used existing landscapes as his inspiration for the Garden of the Pine Wind, which was recognized in 2004 by the Journal of Japanese Gardening as the 15th highest-quality public Japanese garden out of more than 300 in North America.

Included in the four-acre Japanese garden are the Sunrise Bridge, dedicated by Hot Springs' Sister City Hanamaki, Japan; the Full Moon Bridge, constructed by Hot Springs craftsman Bob Lowrey, a 12-foot waterfall, two springs, four pools, and a pond more than a half acre in size.

In the winter, guests are invited to stroll down Camellia Trail and enjoy the array of pink and red camellias, assorted ivy and wild berries, as well as late blooming roses in the Antique Rose Garden. From mid-November through early January, fifteen acres of the Garden are transformed into a spectacular holiday display featuring 1.3 million colorful lights.

Garvan Woodland Gardens is located at 550 Arkridge Rd., 1.1 miles off Carpenter Dam Rd, and is open daily. For more information or holiday schedules, call (800) 366-4664 or visit the website at www.garvangardens.org.



Slow It Down, You're Creating a Monster!

"Open it up and let's go." Ever heard this while boating? Today's boats are faster, and bigger boats and personal watercraft are becoming more popular. A boat's wake can be dangerous to other boats, swimmers and personal property such as boat docks.

Arkansas State Boating Law states that "no person

1. Shall operate a motor boat upon the waters of this state within one hundred feet (100') of a designated recreation area, dock, pier, raft, float, anchored boat, dam, intake structure, or other obstruction (bridges, bank, etc.) at a speed exceeding five (5) miles per hour, unless a contrary speed limit shall have been established in the designated area.
2. Shall operate a boat upon the waters of this state at a rate of speed that creates a hazardous wash or wake upon approaching or passing vessels.
3. Shall operate any motor-boat or vessel or manipulate any water skis, aquaplane, or similar device in a reckless or negligent manner that endangers the life, limb, or property of any person.



When boating, have fun, but be safe and be courteous!



Upcoming Winter Drawdown to Aid Work at Blakely Mountain Dam



This winter Lake Hamilton will be lowered a total of 9 feet to allow the U.S. Army Corps of Engineers to install new monitoring system to keep an eye on the seepage at Blakely Mountain Dam. The dam was designed to last for generations, and the Vicksburg District is ensuring this continues. The monitoring system is part of the overall dam safety program.

All dams are designed to allow for controlled seepage. There are multiple layers of filter material in the core of the dam that allow a small amount of water to flow through the dam without moving any materials.

In the wake of the regular 2005 inspection of the dam, Corps engineers discovered that a layer of filter material had been installed incorrectly when the dam was originally built in 1953. This oversight will require the seepage to be monitored more closely over time.

“The dam has performed well over its 50 years of service and we believe that at this time that it is functioning normally. However, we need to watch the seepage issue more closely as the dam continues to age”, said Bob Fitzgerald, dam safety officer for the Vicksburg District.

To install the monitoring system, the Corps has requested Entergy Arkansas, Inc. to lower the level of Lake Hamilton 9 feet during this winter’s normal drawdown. This will expose the seepage piping system under Blakely Mountain Dam so the water can be channeled and a measuring system installed. In addition to allowing the work at Blakely Dam to occur, this 9-foot drawdown, which has occurred 3 times on Lake Hamilton since 1997, will have added benefits of nuisance aquatic vegetation control. Though construction should begin in November and be completed by June of next year, the drawdown’s timing will occur as in previous years. The drawdown of Lake



Hamilton may affect recreation and shoreline facilities, and users should make arrangements to prepare for this additional lowering of Lake Hamilton’s level.

DRAWDOWN SCHEDULE		
LAKE HAMILTON		
Start Phase 1	Oct. 25, 2008	
End Phase 1	Nov. 2, 2008	4.5'↓
Stable	Nov. 3 to Nov. 7, 2008	
Start Phase 2	Nov. 8, 2008	
End Phase 2	Nov. 16, 2008	4.5'↓
LAKE CATHERINE		
Start	Nov. 17, 2008	
End	Nov. 23, 2008	3'↓
(Return to Normal Lake Levels)		
March, 2009		↑



Personal Watercrafts

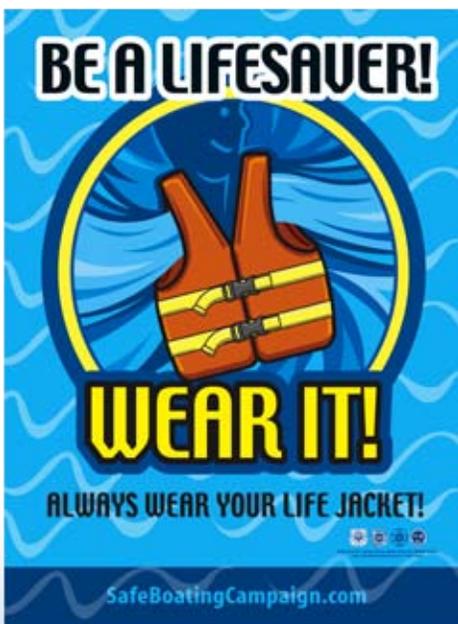
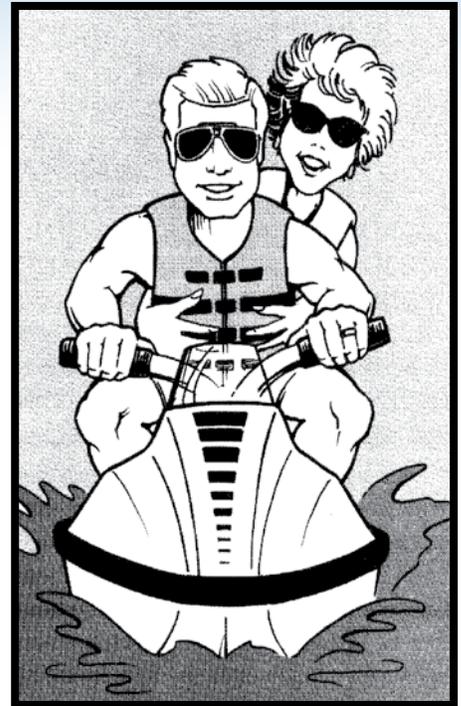
Personal watercraft, known as jet skis, water scooters, water cycles among other names, are becoming increasingly common, but so are accidents involving these nimble and speedy little boats.

It isn't that they are more dangerous than other types of watercraft, it's the way a few people operate them, as well as a lack of operating knowledge and common courtesy that causes many of the problems.

Under the law, a personal watercraft is considered a motorboat. That means it must be registered, and you must abide by all the "rules of the road" that fishing boats, ski boats, cruisers and other boats must follow. You are also required to carry safety equipment as required on other motorboats.

Safety Tips

- 1) WEAR THE PROPER SAFETY EQUIPMENT** - Wear a U. S. Coast Guard approved life jacket. Even better, new impact life jackets, goggles and helmets are available. They are specially designed for use on personal watercraft and provide greater protection. A whistle attached to the zipper of your life jacket is a good idea in case you need to summon help.
- 2) TAKE A SAFE BOATING COURSE** - Contact the Arkansas Game & Fish Commission (<http://www.agfc.com/>) or the Coast Guard Auxiliary concerning safe boating classes in your area.
- 3) RESPECT OTHERS** - That includes not following other boats too closely, or jumping another boat's wake. Stay away from anglers and boat docks.
- 4) KEEP A LOOKOUT FOR OTHER BOATS** - especially other personal watercraft. Collisions are the most common type of personal watercraft accidents.
- 5) BE CONSCIOUS OF THE NOISE YOUR CRAFT MAKES** - If you run it in a small area or around residential areas for a long time, the noise can be irritating to others.
- 6) READ THE OWNER'S MANUAL** - so you understand all the controls and features.



7) ALWAYS HAVE THE SAFETY LANYARD ATTACHED TO YOU - The safety lanyard cuts the engine if you fall, and could save you a long swim home.

8) STAY OUT OF SWIMMING AREAS AND OBSERVE REGULATION BUOYS - Never operate at night. Know the water where you're operating so you can avoid weeds, rocks and shallow areas.

9) DON'T OPERATE A BOAT AFTER YOU HAVE BEEN DRINKING - Alcohol and boating don't mix.

In 2006, according to the U. S. Coast Guard, the number of boating deaths, injuries and property damage increased for the second consecutive year. Overall, two-thirds of all fatal boating accident victims drowned. Of those who drowned, 90% of the victims were not wearing a life jacket. Eight out of every ten boaters who drowned were using boats less than 20 feet in length. Consistent with previous years, 70% of reported fatalities occurred on boats where the operator had not received boating safety instruction.

Remember, LIFE JACKETS FLOAT, YOU DON'T! When involved in a boating accident, you most likely won't have the time to find it "after the fact."



Entergy Arkansas, Inc.
 Hydro Operations
 141 West County Line Road
 Malvern, Arkansas 72104

Help Us With Our Mailing List

Please contact Entergy at
 844-2148 or send an e-mail to
kbogar1@entergy.com
 with any corrections.

What Requires a Permit?

All shoreline facilities, structures and ground-disturbing activities on Entergy Arkansas, Inc. Project 271 lands or water require a permit from Entergy Arkansas prior to installation or placement. Some of the most common types of facilities, structures and activities that require a permit include:

- Boat docks
- Piers
- Landings
- PWC ramps
- Decks
- Walkways
- Boardwalks
- Bridges
- Boat Ramps
- Steps
- Seawalls
- Riprap
- Fill/dredge
- Excavation
- Roads
- Waterlines
- Buoys
- Utility facilities
- Water withdrawal
- Heat/Air exchange piping
- Inflatable platforms/trampolines
- Boat lifts (when outside the slip)



To learn more about Entergy Arkansas' shoreline facility permit program and the requirements and specification for private facilities on Entergy's property, visit our web site at www.entergy.com/hydro or contact us at 501-844-2148.

Do you know of lakefront property owners who are not receiving this publication?

Send their names and addresses to:

Entergy Arkansas, Inc.
 Hydro Operations
 141 W. County Line Road
 Malvern, Arkansas 72104

Editors:

Bobby Pharr
bpharr@entergy.com

Blake Hogue
bhogue@entergy.com

Kimberly Bogart
kbogar1@entergy.com

Flow Release Information
www.entergy.com/hydro
 501-844-2125