

# Life on the Lakes

## Information About Lakes Hamilton & Catherine

### Drawdown Information

The annual drawdown of both Lake Hamilton and Lake Catherine will be 5 feet and will begin November 2. Lake levels will be reduced about 6 inches per day, and the drawdown will be complete on both lakes by Nov. 10. The water released at the dams will be used to generate emission-free, low-cost hydroelectric power. Both lakes will return to their normal summertime levels in March 2014.

In addition to facilitating shoreline maintenance and inspection, the annual drawdown is part of a plan to help control nuisance aquatic vegetation. Entergy Arkansas, Inc. coordinates the annual winter drawdown with the Arkansas Game and Fish Commission. Fisheries, vegetation, facility management and downstream water needs are the key factors considered in deciding the drawdown's depth and timing.

An inspection of the vegetation revealed an increase growth of Chara, a type of green algae, also known as "Muskgrass" because of its musky smell. It is a native species and is typically not considered nuisance aquatic vegetation, though it can cause localized problems for recreation. The excessive growth was first noticed last year, and it is suspected that the warmer temperatures and clearer water, coupled with high nutrient runoff, has given it the perfect conditions to grow in shallow areas with deep sediment.

Entergy and the AGFC had hoped that the winter cold would reduce this year's growth, but it did not. "Maybe this year the dry lakebed will receive a deeper freeze than it did last year," said Bobby Pharr, process superintendent of Entergy Arkansas hydro operations. "Chara is showing itself to be resistant, and our hope is that the weather will give us some help in reducing the amount that grows back next year."

Boaters should use caution while on the lakes during the drawdown period because there will be more shallow areas, and winter rains can increase the amount of debris washed into the lakes. Owners of boats and floating docks should also take precautions to ensure they are able to adjust to the drawdown. Failure to do so may cause damage to them. Some docks will be able to rest on the lakebed with little or no problem. If the shoreline is steep or rocky in a particular area, dock owners may need to temporarily move docks to deeper water. If relocating a dock, be sure it does not restrict navigation or become a boating hazard.

Entergy Arkansas will not require a permit for the temporary relocation of docks due to the drawdown, but the dock must be returned to its permitted location once the lake returns to its summertime level. Entergy Arkansas also recommends using a licensed electrician to make any alterations to wiring in conjunction with the drawdown. (See article on page 3 "Law on Dock Electrical")

Lakefront property owners needing further information on the drawdown schedule or shoreline permitting guidelines and applications for lakes Hamilton or Catherine can call Entergy Arkansas' hydro operations office at 501-844-2148 or visit the hydro operations website at [entergy.com/hydro](http://entergy.com/hydro). Visitors to the website may also subscribe to receive lake and flow information by email. To receive weekly information on the operation of the lakes, the public can "Like" hydro operations' Facebook page at [www.facebook.com/lifeonthelakes](http://www.facebook.com/lifeonthelakes).

#### 2013 Drawdown Schedule

##### Lake Catherine (5 feet)

Start	Nov. 2
End	Nov. 10

##### Lake Hamilton (5 feet)

Start	Nov. 2
End	Nov. 10

Return to normal lake levels in March 2014



[entergy.com/hydro](http://entergy.com/hydro)



# Deadline for Shoreline Applications is November 30th

The deadline for filing applications is November 30 for construction activities to be worked during the winter drawdown. Applications received after the deadline will be set aside to process after the refill unless the applicant is willing to pay an expedited processing fee of twice the normal fee to have it evaluated before the end of the drawdown. So a typical seawall permit that costs \$550 now will be \$1,100 to expedite. Permit applications received after January 31 will not be considered for this expedited process.

It generally takes us a few weeks to process a typical permit application. However, some applications will require additional reviews by state and federal agencies before they can be approved. Applications for bank stabilization and boat ramps may require a minimum 60-day processing period. Dredging and excavation and commercial dock applications may take up to four months. These should be submitted as early as possible if the proposed construction activities are to be performed during the winter drawdown. You can request an application booklet by calling 501-844-2148, or you can go online and print a copy of our application booklet at [entergy.com/hydro](http://entergy.com/hydro) - under the Private Facility Permitting link on the left side.



## The Good, the Bad & the Ugly



Are you experiencing the “Ugly” along your shoreline? Many lakefront property owners have been significantly impacted with an excessive growth of “Chara.” Chara looks like rooted, aquatic plants, but is actually a form of algae. It is in the same family as filamentous algae, which most folks think of when they see the green mossy mass of vegetation that forms on the bottom but breaks loose in late August. Chara is also known as muskgrass, due to its odor when disturbed.

Most native aquatic vegetation is desirable in a body of water. A sterile swimming pool effect for a natural body of water is not the goal, but there is a balance between too much vegetation and too little. Remember the “Good” is that vegetation is important for healthy aquatic environment. Branches of Chara are eaten by waterfowl and serve as important grazing locations for aquatic insects that, in turn, become food for fish and other wildlife. It provides shelter and acts as a nursery for young fish.

So why are we seeing such an explosive growth the last two years?

The exact reason is hard to pin down. Excessive growth of aquatic plants is usually due to several factors combined. First of all, it normally occurs in shallow water with sediment that sunlight can reach to support photosynthesis. It requires water rich in nutrients, such as nitrogen and phosphorus, which provide the plant food. Water clarity and temperature are also factors that affect growth.

Our lakes get their share of nutrients from the shoreline development as more and more home owners are fertilizing their yards. Improper fertilizing feeds the aquatic vegetation, in addition to the lawn.

Control of overabundant algae like Chara is best accomplished by reducing or redirecting nutrients from sources like yards. This can be accomplished by lakefront property owners reducing fertilizer applications, insuring that your sprinkler systems stay off during and immediately after applying fertilizer and maintaining vegetative buffer strips between your yard and the lake.

Other ways to control Chara is through physical pulling, raking, and cutting, but this control will be short lived. Both of these algae will recolonize through spores and fragments left behind after harvesting.

Drawdowns are one of the most successful methods for vegetation control, but the degree of success depends on the severity of the winter. Exposure of the sediments in the shallow areas to alternate freezing and thawing action will help kill the underground structures of many aquatic plants. Some plants are more resilient than others. The “Bad” is that alga is one of the toughest aquatic plants to control with drawdowns. However, it can be impacted. Any success is dependent on the weather and how deep the ground freezes. Stocking grass carp can also control Chara because Chara is among their preferred foods. The Arkansas Game & Fish Commission is working with Entergy and is considering stocking grass carp next year, if available.

What can you do, other than take steps to keep your yard fertilizer out of the lake? Aquatic herbicide treatment with a copper sulfate product, like granular CutrinePlus, is an option, but it should be done early in the growing season before the plants cover a large portion of the pond. Waiting until it becomes a problem causes the vegetation to become tough, and the temperature of the water affects the effectiveness of the herbicide. Chemical treatment is only a temporary solution. Keep in mind that chemical control is often necessary every year or even multiple times during a year. Unless you can treat all the vegetation in a particular area affected, it will spread back into the previously treated area.

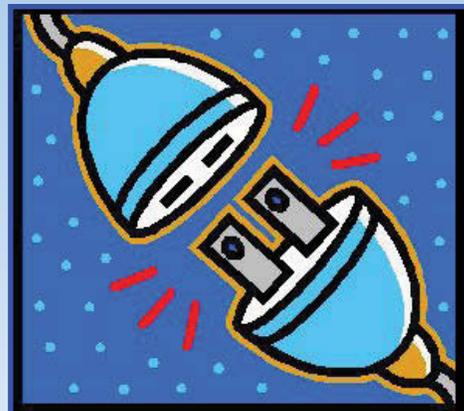
## ***Attention: State Law on Electrical Connections on Docks***

In 2011 the Arkansas State Legislature passed a new law called “Boat Dock and Marina Safety” and subtitled, “Jesse’s Law.” Act 571 was passed by the Arkansas State Legislature after there had been several cases of electrocution of swimmers near docks in Arkansas and surrounding states.

### **The act states:**

“Arkansas is known for its beautiful and abundant lakes and rivers, which provide a draw for tourism and a boost for our economy. Our lakes and rivers should be a safe place for children and families to enjoy. There have been cases recently where children have died because the water where they were swimming was electrified by the ungrounded and improper connection of electricity to boat docks and marinas.

Electricity and water create a deadly combination that can paralyze a swimmer, which can result in the swimmer drowning, and children who are swimming are particularly vulnerable to electrocution and the shock in the water. Bringing boat docks and marinas up to the National Fire Protection Association Standards for Marinas and Boatyards and the National Electric Code is necessary for the protection and safety of all of those who enjoy our lakes and rivers for recreation and to protect our tourism industry.”



### **The law requires:**

- The owner and operator of a boat dock or marina in the state shall install and maintain electrical wiring in accordance with the National Fire Protection Association Standards for Marinas and Boatyards and the National Electric Code to prevent shock, electrocution, or injury to users of the facility and swimmers in the surrounding area.
- Each boat dock and marina in the state that is not located on a federal impoundment owned or managed by the United States Army Corps of Engineers shall have signage that warns of electric shock hazards in the waters surrounding the boat dock or marina and the risk of swimming in the area as provided under this section.
- The signage under this section shall be placed to give adequate notice to persons using the boat dock or marina or swimming near the boat dock or marina of the electric shock hazard risks of the waters around the boat dock or marina.
- The signage shall state:
  - **“ELECTRIC SHOCK HAZARD RISK: SWIM AT YOUR OWN RISK”**or
  - **“WARNING ELECTRIC SHOCK HAZARD”** on one sign and another separate sign that states **“SWIM AT YOUR OWN RISK”**.

You can view Act 571 in its entirety at <http://www.arkleg.state.ar.us/assembly/2011/2011R/Acts/Act571.pdf>.

Entergy Arkansas, Inc. current guidelines for docks and other shoreline facilities states that it is exclusively and specifically the responsibility of the permittee (dock/facility owner) to ensure that all electrical work complies with federal, state and local codes.

We recommend that you use a licensed electrician for any electrical work on or near the shoreline. This would apply to docks, boat lifts, and water withdraws pumps, lights, outlets – anything that requires electricity near the dock or near the shoreline.

You can check with local sign & graphics companies for obtaining the dock signs with the appropriate wording.

## ***Submersible Pump Concerns:***

The Underwriters Laboratories (UL) has determined that the placement and utilization of submersible pumps in marine environments where swimmers and waders may be present is a safety hazard. In response to this information, Entergy is requesting that all submersible pumps be removed from Entergy’s lakebed. Electric centrifugal pumps, jet pumps or other types with all electrical components located out of the lakebed are acceptable.

***Electricity and Water Don’t Mix***



## Check Stations

### Lake Catherine

Lake Catherine State Park  
Carpenter Dam Park  
Shoe Factory Ramp  
Rommel Dam Park

### Ouachita River

White Water Park, Malvern

### Lake Hamilton

Sunnybrook Landing  
Hill Wheatley Park  
Power Boats (Central Ave.)  
Hulsey Fish Hatchery

## Public Lake Cleanup Sept. 21

Join us on Saturday, Sept. 21 for "Trash Bash," a public cleanup of lakes Hamilton and Catherine and the Ouachita River, as well as area roads. The annual litter clean-up day will be followed by a luncheon and activities at Garvan Woodland Gardens for everyone picking up litter.

There will be free food, drinks and lots of prizes. This year's grand prizes will be a new laptop computer and flat screen TV. All participants will also receive free admission to Garvan Woodland Gardens.

The clean-up will begin at 8 a.m. The luncheon will be between 11 a.m. and 1 p.m. All groups and individuals must register at a check station to participate and be eligible for the awards and prizes.

**Come and make a difference** and enjoy great barbeque at the Gardens.



## 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 specifications for private facilities on Entergy Arkansas' property, visit our website at [entergy.com/hydro](http://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, Ark 72104

Editors:

Bobby Pharr  
[bpharr@entergy.com](mailto:bpharr@entergy.com)

David Batson  
[dbatson@entergy.com](mailto:dbatson@entergy.com)

Kimberly Bogart  
[kbogar1@entergy.com](mailto:kbogar1@entergy.com)

Flow Release Information  
[entergy.com/hydro](http://entergy.com/hydro)  
(501) 844-2125