

LAKE NEWS

and Shoreline Views



Bagnell Dam Stabilization Project Update

Bagnell Dam is in the latter stages of a major stabilization project, which consists of several different areas of upgrade. The two main parts of this project are installing 69 anchors at the base of the dam and adding concrete between the piers under the road. The anchors are metal strands or tendons which are grouted into bedrock and then tensioned with as much as 2,000,000 pounds of force each. Adding concrete between the piers, referred to as in-fills, adds 66,000,000 pounds of weight to the dam, further increasing stability of the dam. Along with these two major stages of the stabilization project, the back side of the 87 year old dam has been stripped of the outer 3-9 inches of weathered concrete and a new outer layer is being installed, referred to as an overlay of concrete. The in-fill additions and the overlay are the two most visible phases of the project. Finally, new drains will be installed from the concrete to bedrock interface, as well as a new drain trough along the back of the dam. This project began in the spring of 2017 and is scheduled to complete in early fall of 2018.



Family Legacy Anchored at Bagnell Dam

We bid a fond farewell to Alan Sullivan who retired in April after working over 40 years at Bagnell Dam. Raised in Tuscumbia, Missouri, Alan's roots with the company and the lake date back to his grandfather and his uncle who worked on the construction of the dam earning a whopping 35 cents an hour in 1929. Along with Alan's family members, over 20,000 people were hired during this critical time in our nation's economic history. Alan carried on that rich history with Union Electric, now Ameren Missouri, starting with the company in 1977—when highway 54 was just a little two lane highway meandering through the virtually undeveloped Lake area. His first role with the company was as site inspector for seawall permits. During those early days, Alan would take photos with a Polaroid camera and hand write reports—complete with hand sketches of proposed seawalls. There were no cell phones, digital cameras or email, so reports were mailed to the Union Electric Real Estate Department in St. Louis for final approval. Back then, Alan assisted the Corps of Engineers with dock permits on the lake. The Corps later transferred their permitting authority for docks to Union Electric during the development boom of the early 1980s. Alan's good work back in the late 1970s, with a slide rule and hand-crank adding machine, has now evolved into a shoreline management staff who process 1000s of permits and work with countless residents and developers each year while protecting the lake's resources. His work at Bagnell Dam has progressed from those same humble beginnings to the super

sophisticated technology at the Osage Energy Center where every detail of the power generating equipment is monitored. Computers and electronic systems operate and notify plant operators and engineers when something is not right at any one of Ameren's three hydro plants. Alan worked with a team that effectively operated all three plants right here from the Lake. During his time at Bagnell Dam, we have changed, upgraded, and modified generators, turbines, transformers, computers and controls—including many environmental improvements that benefit natural resources above and below the dam. His great work with the Osage engineering team has produced designs that have made Bagnell Dam one of the most technologically advanced and environmentally friendly hydro generation stations in the world.

Outside of work, Alan's contributions in the lake community have been numerous, including work with the Chamber of Commerce, his church, community civic groups and charities, the Willmore Lodge restoration and continued support of the annual lake cleanup. Alan is a true ambassador to his company and the lake community. He told us that it has been his honor and privilege to be surrounded by so many incredibly gifted and generous folks for these many years, both within Ameren Missouri (Union Electric Co.) and in the lake community. "Thank you everyone for allowing this incredible opportunity to a small town boy, whose dream of being a part of the history of Bagnell Dam has become a reality". Alan, we thank you for your numerous and selfless contributions to Ameren Missouri and the lake community. Without a doubt, the lake is a better place because of you and we wish you the best in your retirement.

Project Boundary

Ameren's project boundary is an important elevation based line that defines where shoreline improvements are managed by Ameren Missouri. Although it can be higher in some areas, the project boundary is most commonly at the 662' elevation. Although the 662' elevation may occur on the face of a seawall, **the project boundary is never located directly at the seawall;** it will always be behind the wall a minimum of 3 feet or more. There are many shoreline activities permitted within the boundary; however, it is very important to note that all structures located within the project boundary must be in compliance with Ameren Missouri's approved shoreline management plan (SMP). On March 1, 2018, the Federal Energy Regulatory Commission (FERC) approved an update to the SMP. This update allows for the very limited construction of shoreline accessory structures such as decks and patios. These limitations include:

1. **Constructed of environmentally safe materials**
2. **Located no closer than five feet from the applicant's extended side property line**
3. **Shall not exceed 150 square feet of total size within the project boundary**
4. **Maximum width may not exceed 15 percent of the total lot width or 15 linear feet, whichever is more limiting**
5. **All construction elements must be placed landward of the 660' elevation**
6. **No structure may cantilever or extend beyond or over the shoreline, eroded bank or water surface. Decks and patios will not be allowed to be directly supported or place over seawalls or any other structure with footing at or below elevation 658.5' (USACE jurisdiction)**
7. **No portion of the structure may be roofed**

You should know where the boundary is or have it marked prior to planning any shoreline projects. If you have questions about the project boundary or allowable constructions along the Lake's shoreline, contact Ameren Missouri's shoreline management office at **1.573.365.9203** or visit **AmerenMissouri.com/lake**.

Join Us!

Would you like to become part of the Lake cleanup effort? The Adopt-the-Shoreline program allows interested individuals, groups and organizations the opportunity to "Adopt" a section of the Lake's shoreline for annual cleanup. Currently, over 600 miles of shoreline has been adopted leaving plenty of opportunities available. If you would like to participate, contact us at 573.365.9252 or visit AmerenMissouri.com/ats.

Adopt • the • Shoreline



WE WANT YOUR COMMENTS ON OUR NEWSLETTER

Please email us at lake@ameren.com to tell us what you think. If there are any other topics you wish we would include in our next issue, we would like your ideas.



The Water Patrol Division of the Missouri State Highway Patrol is the permitting authority for buoy markers on Lake of the Ozarks. Buoys may be permitted to mark dangerous underwater obstructions or to indicate certain navigational restrictions. The Water Patrol Division hosts public hearings in January, March, May, and November each year. The dates and times of the public hearings are posted on the Water Patrol Division's website. The division's public hearings allow interested parties to provide input on buoy applications received. The applicant will typically receive a letter regarding the status of their application within two weeks after the hearing.

Although danger buoys may be permitted in certain shallow areas that are considered to have heavy boating traffic, boaters are responsible for knowing the area in which they boat. Buoys are damaged and often drift away due to boat traffic and the harsh environment on the water. Depending on a danger buoy to prevent running aground in a shallow area can be potentially dangerous.

The most common buoy permits for Lake of the Ozarks are no wake buoys placed 100 feet from individual docks. These buoys are simply a reminder to boaters of the requirement for boats to be 100 feet from docks if operating above idle speed. If placed properly, no wake buoys also give boaters a gauge of what 100 feet looks like on the water. Since they are only a reminder of the existing law, the Water Patrol Division will not permit a no wake buoy to every dock owner. An effort is made to create space between buoys when they are issued. An exception to this practice could be a dangerous point, where the contour of the shoreline results in docks facing different directions. In cases such as this, individual buoy permits may be granted in close proximity. As with shallow areas, boaters are expected to boat responsibly near docks. No wake buoys permitted to individual docks do not transfer if the property changes ownership. The new owner is required to re-apply for the buoy permit.

Requesting a no wake cove designation is also a part of the buoy permitting process. The application process is more extensive than requesting an individual buoy, and there are many more factors to be considered. Lake of the Ozarks is a public waterway. Although property owners certainly have a say in the process for designating a cove to be no wake, they do not have the only voice. Whether a boater has lake front property or launches a boat at a public boat ramp, recreational usage of the waterway is shared. Persons interested in applying for a no wake cove designation should contact the Water Patrol Division to begin the process.

Lights should not be placed on buoys unless permitted to do so. There are specific standards on the type of lights allowed to be mounted on buoys. Requests to add a light to an existing buoy permit should be directed to the Water Patrol Division.

The Water Patrol Division conducts an annual audit on a certain percentage of the permits for Lake of the Ozarks. Approved buoys and signs must be in place from April 1 to October 1 each year. If the permitted markers are not in compliance, the permit holder will receive a letter of notification. If the buoys are not brought into compliance within 21 days from the date the letter was mailed, the permit may be revoked. To ensure receipt of the discrepancy notification, it is imperative the Water Patrol Division has current contact information for permit holders.

Buoy applications can be submitted electronically or printed from the Water Patrol Division's website:

www.mshp.dps.missouri.gov/MSHPWeb/WaterPatrol/index.html

For questions regarding buoy permits, call the Water Patrol Division at **1.573.751.5071**, or email the division buoy coordinator at buoys@mshp.dps.mo.gov.



Lake of the Ozarks Fish Stocking

by Greg Stoner,
MDC Fisheries Biologist at Lake of the Ozarks

Lake of the Ozarks is home to approximately 60 species of fish, of which only about 20 are routinely sought by anglers. Surprisingly, only 4 species of gamefish are routinely stocked. The rest are maintained by natural reproduction, thanks to the lakes excellent habitat, water quality, and forage base (science jargon meaning “lots of gizzard shad for gamefish to eat”).

In general, fish are stocked to either maintain a threatened or endangered species, to enhance an existing fishery, or to create a new fishery. Stocking in Lake of the Ozarks is based on the latter two reasons.

Paddlefish and **Walleye** existed in the Osage River prior to the construction of Bagnell Dam in the late 1920s. Populations of these two species, which were trapped in the lake after impoundment, did quite well until the construction of Harry S. Truman Dam in 1979. Both of these species must travel up into large tributary streams to spawn. After being cut off from their primary spawning areas by Truman Dam, their populations in the lake quickly started to decline to the point where a viable fishery would cease to exist without stocking. Mature adult paddlefish and walleye from Lake of the Ozarks are now collected and spawned in Missouri Department of Conservation hatcheries.

The **Striped Bass** is actually a saltwater fish that does surprisingly well in freshwater systems. **Hybrid Striped Bass** are produced by crossing a striped bass with a native white bass. Because of their growth potential (60+ pounds for striped bass, 20+ pounds for hybrids) and willingness to hit a lure, these species have been stocked to create bonus/trophy fisheries in Lake of the Ozarks and throughout much of the Midwest and southeastern United States.

How many fish are we talking about? In the past 5 years (2013-2017), an annual average of approximately 27,000 paddlefish, 200,000 walleye, 30,000 striped bass, and 50,900 hybrid striped bass have been stocked in the lake.

Ameren Missouri has been involved with the rearing and stocking of fish in Lake of the Ozarks since Bagnell Dam was constructed. The Grand Glaize Hatchery was owned and operated by Ameren Missouri (formerly Union Electric) from 1932 through 1996. The aging hatchery has since been converted into what is now Osage Beach City Park. Soccer fields now sit where thousands of gamefish were once raised. With the rearing ponds now gone, the hatchery water supply pond is the only remaining body of water in the park and is maintained for fishing. Since 1996, Ameren Missouri has committed annual funds to the Missouri Department of Conservation in effort provide invaluable support for maintaining the Lake of the Ozarks sport fishery.

The Stocking Process (very simplified):



1. Get adult broodstock from the wild



2. Collect eggs/sperm and fertilize



3. Aerate fertilized eggs



4. At hatching, fry are moved to outside ponds

Destination: Warsaw, Missouri

Enjoy the great outdoors in beautiful Warsaw, MO. Warsaw has developed its Lake of the Ozarks waterfront as a new destination on the lake.

Warsaw is the hub of where two great lakes meet, and truly a nature-lover's paradise! The Osage River/Lake of the Ozarks and Truman Lake (Missouri's two largest lakes) provide more than 110,000 acres of rich and abundant wildlife, unsurpassed natural beauty and a compelling history, all rolled together to make it the perfect destination for your next adventure!

From Harry S. Truman Lake Dam to Bagnell Dam, it's only 92 miles by water. Make it a day of exploration by cruising up the river, enjoying a few pit stops along your journey on the Lake of the Ozarks and arriving at Drake Harbor for a short walk to downtown Warsaw. Warsaw is home to many great restaurants and unique shops to visit before heading back home.

The Warsaw Riverfront Trail System has continued to grow in the last several years. This unique trail system runs along the upper Lake of the Ozarks, and links three major parks - creating a linear park along the scenic waterfront area that offers beautiful views of the Ozark hills, bluffs, lakes and greenways.



Warsaw Dice Bridge

This area offers approximately five miles of riverfront trails that are great for walking, running, and bicycling. Along these trails you will find many species of waterfowl, bald eagles, deer, turkey and other wildlife. There are areas to picnic, bird watch or work on your nature photography. Throughout the unique trail system there is a 9-hole disc golf course, horseshoe pits, numerous picnic and play areas, an amphitheater, festival areas, a gazebo, boat launch areas, boat slips, the Bledsoe Ferry Sports Complex and the Truman Lake Mountain Bike Park and Hiking Area, that is home to 22 miles of trail. There are also many peaceful areas to simply relax and enjoy the flora and fauna. Bring your binoculars to catch a glimpse of a bald eagle or other wildlife that calls Benton County their home.

Additionally, the historic Joe Dice Suspension Bridge is an added historical and cultural feature that has been renovated for night and day use. The swinging bridge was a transportation route for horses and automobiles at one point, but today is used for bicyclists and pedestrians, and serves as a major link for the trail



system. This bridge is the only link from one side of the waterfront to the other. The Joe Dice Suspension Bridge is on the National Register of Historic places.

Warsaw's Drake Harbor Recreation Area is the perfect spot to launch your boat, with eight public boat slips and more than enough parking spots for trailers and vehicles. The Truman Reservoir and the upper Osage River/Lake of the Ozarks offer great opportunities for fishing.

Warsaw offers unique festivals and events throughout the year. For six years, Warsaw has hosted the Benton County Wine Stroll, which was held on April 28 this year—allowing wine lovers to stroll, sip and shop in the downtown. The downtown is linked with sidewalks from the Steamboat Landing Boardwalk.

Warsaw's Jubilee Days is set for June 8-9, 2018. There will be crafters, live music Friday and Saturday, a beer garden, carnival, food vendors, kid's activities, a car show, and a parade.

The 2nd Annual Ozark Cigar Box Guitar Festival is set for August 4-5, 2018 at Drake Harbor Recreation Area, showcasing nationally recognized musicians playing tunes on their handmade instruments. The event has includes a KCBS Sanctioned Taste of the Ozarks BBQ Competition on August 4.

The biggest festival in Benton County, bringing 10,000+ craft-lovers to shop handmade crafts is Heritage Days, October 20-21, at Drake Harbor.

For more information on festivals and events, lodging and attractions contact the Benton County Tourism & Recreation by visiting www.visitbentoncomo.com or call **1.660.438.2090**, the Warsaw Chamber of Commerce at www.warsawchamberofcommerce.com or call **1.660.438.5922** or the City of Warsaw at www.welcometowarsaw.com or call **1.660.438.5522**.



ELECTRICAL SAFETY RULES:

All docks need continual inspections by their owners. Water movement can cause wear on your dock's electrical equipment. Monthly ground fault circuit interrupter (GFCI) testing of electrical equipment and bonding wires is recommended.

During the winter, wires and electrical outlets can deteriorate due to freezing and thawing. Electrical equipment that worked well the prior season will need to be inspected before using the dock again.

Have both the dock and the power supply to the dock regularly inspected by a qualified electrician.

Electrical problems in or near the house and lines feeding the dock can cause life-threatening problems, even with docks that meet code and have been inspected.

Never swim around a dock where breakers or GFCIs are tripping. HEED THE WARNING SIGNS! If in doubt, swim away from the dock and get out! If a breaker or GFCI trips, something is wrong and the dock should be considered unsafe until a qualified electrician inspects and fixes the problem.

Never attempt to energize or re-energize, engage a breaker, or reset a GFCI while someone is swimming near the dock. Get the dock inspected and fixed before using or swimming nearby.

Do not touch any part of the dock or adjacent docks if a tingle or shock is felt. Swim or get away from the dock, cables and attachments. Exit the water away from the source of the shock. If possible, swim to the shoreline and exit there.

For additional information on dock electrical safety, visit your local fire district website or SafeAtTheLake.com.



P.O. Box 993
Lake Ozark, MO 65049

Website:
AmerenMissouri.com/Lake

Important Phone Numbers:

Lake Protection Hotline
1.573.365.9203

Lake Level
1.573.365.9205

Adopt-the-Shoreline
1.573.365.9252

Water Patrol Division (Non-Emergency)
1.573.751.3313

Benton County (Emergency Management)
1.660.438.8412

Camden County (Planning & Zoning)
1.573.346.4440

Miller County (County Commission)
1.573.369.1900

Morgan County (County Commission)
1.573.378.4643

Shoreline Management Staff is here to assist you with your next Lakeside project and to help answer your questions about Ameren Missouri's role at the Lake:

Osage Arm – Bagnell Dam to 16-mile marker and Gravois Arm

Josh Friedrich — 1.573.365.9247
Chris Korsmeyer — 1.573.365.9209

Osage Arm – 26-mile marker to 32-mile marker, and the Niangua Arms

Chuck Van Bebber — 1.573.365.9215

Osage Arm – 32-mile marker to Truman Dam

Joe Daly — 1.573.365.9207

Commercial docks, docks larger than 3,000 square feet, 16 to 26 mile marker Osage Arm and Glaize Arm

Heidi Shewmaker — 1.573.365.9216

Dredging, wetlands, shoreline vegetation or other environmental questions

Bryan Vance — 1.573.365.9252



EVERY STRUCTURE ALONG THE LAKE SHORELINE MUST BE COVERED BY A VALID PERMIT. Do you have copies of yours? The shoreline management office can help you get copies if you need them. Permit records are cataloged by name and county parcel identification numbers (PID) rather than street addresses. Contact our office with name and county parcel information and we will help you.