

Lake of the Ozarks Watershed Alliance, Inc. (LOWA)

October 17, 2011

Public Meeting

Old Kinderhook, Camdenton

The meeting was called to order at 5:30 by LOWA President Christy Fera. President Fera welcomed everyone and then welcomed introductions round robin.

Caroline Toole, LOWA's 319 Project Manager and Recording Secretary, spoke first about LOWA's newest project, which is to write a watershed management plan for the Niangua Arm of the Lake of the Ozarks. Toole presented an overview of this project. A summary of the presentation is presented in these minutes.

LOWA's Mission Statement is: **Citizens will preserve, protect, and improve the Lake of the Ozarks, its watershed and natural resources, while maintaining our economic, social, and environmental health.**

A watershed is the land that drains to a body of water, such as a creek, river, lake or ocean. When it rains and there's rain water draining off the land, that rain water drains to some body of water, whether it's a lake or a stream or an unnamed tributary to an unnamed creek. The land that the rainwater flows over is the watershed for that body of water. Little watersheds are part of bigger watersheds which are part of yet bigger watersheds as a creek drains to a stream which drains to a river which drains to the lake.

Our lake becomes the Osage River again after Bagnell Dam. And the Osage flows into the Missouri River, which flows into the Mississippi River, which flows into the Gulf of Mexico. Right now, the Gulf of Mexico has a large dead zone at the mouth of the Mississippi, where the Mississippi enters the Gulf. This dead zone is an area of water where there's not enough oxygen in the water to support life. And it has nothing to do with the oil spill or anything like that. There's a large dead zone because of too many nutrients coming down all those rivers and into the Mississippi and then dumping into the Gulf. Those nutrients are plant food and an overabundance of nutrients like nitrogen and phosphorus causes too much algae to grow too fast. That's an algae bloom. A lot of algae grow all at once and then when the algae die, the bacteria that decay the dead algae use up the oxygen in the water, so nothing can live. One algae bloom once wouldn't cause a dead zone, but the constant inflow of large amounts of nutrients from the Mississippi (the Mississippi watershed – all the land that eventually drains to the Mississippi - from the Rockies in the west to the Appalachians in the east – the largest watershed in North America) cause repeated algae blooms. We are in the watershed of the Mississippi as well as being in the watershed of the Lake of the Ozarks. So, what we do in our own yards really does have an impact a thousand miles away.

Presently, the Osage Arm of the Lake of the Ozarks (LOZ) is on the Environmental Protection Agency's (EPA) 303.d List of Impaired Waters for excessive nitrogen. The Niangua Arm of LOZ is on the 303.d List for excessive phosphorus. The Lake of the Ozarks is still a very healthy lake, but we should consider this listing as a red flag of warning to do what we can to reduce levels of these nutrients to a level where we don't have to worry about algae blooms. In 1999, a large section of the James River Arm of Table Rock Lake experienced a sudden algae bloom. The water turned the color and consistency of pea soup. Because we have adequate warning, we – all the people of the lake area – really can do something about this and keep our

lake healthy and beautiful. All the monitoring around the lake shows that Lake of the Ozarks is a very healthy lake, but it can be stressed and it does respond to heavy storms and too much runoff.

Just as LOWA wrote a watershed management plan for the first 18.8 miles of the Osage Arm and its coves, LOWA is now beginning the process of writing a similar watershed management plan for the Niangua Arm. Addressing the phosphorus issue is rather controversial because a certain amount of phosphorus is needed to feed the plankton, which feed the little fish, which feed the big fish that anglers like to catch. The Lake of the Ozarks is a tremendous fishery and hosts more fishing tournaments than any other lake in the state. But with that very much in mind, there is something we all can do to help keep our lake good and healthy and that is to control the amount of stormwater runoff reaching the lake through many different means. Every land owner around the lake area can use Low Impact Landscape designs (LOWA LILs) to help slow that runoff, give it a chance to soak into the ground, and reduce the amount of runoff reaching the lake. And when some stormwater runoff inevitably reaches the lake or stream or creek, have a vegetated buffer strip to help filter that water.

The watershed for the Niangua River is all the land that drains to all the creeks and streams that drain into the Niangua River. Toward the mouth of the Niangua, the influence of Bagnell Dam is felt by the river and it becomes part of the Lake of the Ozarks. This part of the Niangua is the Niangua Arm of the Lake of the Ozarks. LOWA will be writing a watershed management plan for the Niangua Arm to address the issue of being on the 303.d List for excessive phosphorus. The specific part of the Niangua Arm and surrounding land (the watershed of the Niangua Arm) is defined by a Hydrologic Unit Code or HUC #102901100403 and is called "Ha Ha Tonka – Lake of the Ozarks". This watershed includes the part of Camdenton west and south of old highway 5, about half of Ha Ha Tonka State Park, and most of the Niangua Arm, but none of the Little Niangua Arm.

What is a watershed management plan? An effective watershed management plan (wmp) should: describe its watershed and the stakeholders in that watershed; determine the "loads" to the watershed, describe the impairments and the sources of impairments, determine how the loads will be reduced, describe what practices will be implemented to address the impairments, describe expected outcomes, determine all the education and information outreach activities, and put it all together into one coherent plan. Whew. Because LOZ is so large, many wmps will probably eventually be written to cover the many different parts of the Lake and the many different issues. But for now, LOWA is just beginning the process of bringing together the background information, compiling the concerns of the people around the Niangua Arm and around the whole lake, and coming up with a set of strategies which address the needs of the Niangua Arm. The Lake of the Ozarks and all its Arms are healthy and beautiful. LOWA believes we can all work together to act proactively and keep the Lake healthy and beautiful.

Why write a watershed management plan (wmp)? Once a plan has been written and accepted by MO Department of Natural Resources and the EPA, then anyone can use that plan and the ideas in that plan to write a grant and get funding to put the plan to work. A wmp does the research to find the issues, explain the background, describe the stakeholders, and develop a highly comprehensive plan to address the issues.

All around the lake are Source Water Protection Areas which are areas where surface waters are replenishing the drinking water. In an area like the Ozarks, of caves and sinkholes and karst topography, the thin soils and cracked up bedrock mean filtering and cleaning the water coming from the surface may not work as effectively as in many other parts of the country. And this is another reason we need to take care of the surface of the land – the watershed – in order to

protect our well water. Several parts of the watershed include densely populated shorelines and these especially are areas where many people each doing a little bit to help the watershed can add up to a large effect. But these are also areas where so many people can, often unknowingly, have a negative effect. That's why we all need to be careful about our actions and try to understand the question: what are the ways we can all help keep our lake healthy? These are topics the upcoming watershed management plan will try to address.

Some local sources of nutrients, including phosphorus and nitrogen, all around the lake are fertilizer, not just agriculture and golf courses, but from our own lawns too; pet waste (!); wildlife; leaves (don't blow your leaves into the lake! The Lake gets enough leaves from Mother Nature); soil erosion; and maybe even leakage from poorly functioning septic tanks or poorly managed permitted facilities.

Looking at information about the Ha Ha Tonka from the CARES watershed information site on the web (just Google CARES map room), we see that this watershed has a lot of highly erodible soils and lots of steep slopes, as well as several large springs and many source water protection areas. All of these characteristics can lead to a lot of fast moving stormwater runoff. In fact, the EPA now considers stormwater pollution to be one of the most significant sources of contamination in our nation's waters. And that's where LOWA LILs come in. "LILs" stands for Low Impact Landscapes and includes all the different ways individuals can help to reduce the amount of stormwater runoff reaching the Lake. The LOWA LILs Project was developed in LOWA's first watershed management plan and is now being implemented through a grant that was written after the wmp was written and accepted. The LOWA LILs Project focuses on the first 19 miles of the Lake but reaches out to all parts of the Lake. LOWA is encouraging land owners all around the lake area to implement a series of landscape techniques like rain gardens, rain barrels, vegetated buffer strips, terracing, vegetated channels, and compost sock berms to slow the runoff and give the runoff a chance to soak into the ground either right then or held until after the storm.

A rain garden is a depression dug into the soil, filled with lots of chipped hard wood mulch and rich soil, and planted with a variety of native plants chosen to provide color, texture, and beauty each season. The rain garden is located and designed to catch stormwater runoff, absorb it, and allow the rain water to soak into the bark mulch and the ground where the native plant roots will soak it up. A rain barrel is a container (or containers, any shape or size) that hooks up with the rain gutters to catch and store rain water. The caught water can then be used later to water plants, lawns, gardens, or simply released out slowly after the storm has passed. Compost sock berms (also called silt socks in the construction industry) are tubes of mesh filled with shredded leaves, composted bark mulch, or other similar materials that are laid down on the ground to catch stormwater runoff, slow the runoff, and give the stormwater more of a chance to soak into the ground. These berms also catch any soil or debris washing down with the runoff and the berms can be planted in.

The ideas about LOWA LILs were first discussed in the document: A Watershed Management Plan for the Lake of the Ozarks – Buck Creek (HUC#102901090501) and Lick Branch (HUC#102901090506) available online at www.sosLOWA.org. And LOWA LILs can be read about at www.sosLOWA.org/lowalils.html, or by clicking on LOWA LILs on the home page. The Niangua Arm has many of the same issues as the Osage Arm: population density, steep slopes, and too many opportunities for runoff to reach the Lake, bringing with it soil, bacteria, and nutrients. But the Niangua Arm also is different from the first 19 miles of LOZ and so will need solutions specific to its own concerns.

Old Kinderhook, which did donate the room for tonight's meeting, does try to reduce and take care of runoff around its shoreline through the use of vegetated buffer strips along the shore line. Vegetated buffer strips are areas along the shoreline which have been planted with enough different types of plants to slow the runoff down and filter it before the runoff reaches the lake.

Then the audience was given a chance to make comments or voice concerns. No one had any comments. Then the audience was asked if anyone knew of any places along the Niangua Arm with animal operations where a different research group was looking for different sources of manure and feces to establish a DNA library of different animals to try to find out where different sites of E. coli were coming from. No one had any suggestions.

When asked if anyone was interested in being part of the Steering Committee to aid in the writing of a watershed management plan for the Niangua Arm of the Lake of the Ozarks, Diane Franklin and Steve Thompson both volunteered. Thank you two very much! Getting citizen input is very important. If others are interested in being part of this process, please contact LOWA at 573-434-4400. Online is also a place to sign up as a volunteer or to be on LOWA's email list for notices of events at www.sosLOWA.org.

Committee Chair Reports

Lake Safety – Carroll Vogel, U. S. Coast Guard Auxiliary, is LOWA's Lake Safety committee chair and LOWA's liaison with the LOZ Water Safety Council who are now administering the Designate a Captain program which LOWA started. **Designate a Captain** now has a brand new flyer with a fully updated map and a list of all the lake area bars and restaurants that honor the Designate a Captain program, which works similarly to the designated driver programs. The person driving the vessel can get a free non-alcoholic beverage at participating establishments (which is probably about all of them!) and that way the lake's boaters can boat responsibly, with a sober captain.

Water Quality - Greg Stoner, MDC Fisheries Biologist, is LOWA's Water Quality committee chair and, for the last 5 years, has been in charge of organizing the collection teams of volunteers for the DNR 5-year E. coli Cove Study at LOZ. With the conclusion of this 5-year study and to celebrate the fantastic job water quality monitoring volunteers have done for LOWA, a celebratory dinner was held at the new Cannon Smoked Saloon off O Road outside of Laurie. Water collection volunteers from the 5-year E. coli Cove Study, LOZ monitors from the Lakes of Missouri Volunteer Program (a program that uses citizen volunteers to monitor water quality at lakes all over the state), and water quality monitors with LOWA's 20-week cove study (the first phase of which is also finished) were all invited to help celebrate water quality monitoring volunteers at the Lake of the Ozarks. Celebrate Volunteerism!

Recycling – Gaye Belloir and Nancy Pope are Co-Chairs for LOWA's Recycling Committee which, among other things, has been responsible for bringing two highly successful Household Hazardous Waste (HHW) Reclamation Days to the Lake of the Ozarks area. The grant that has made these possible is a solid waste grant from District T, an agency that administers grant monies for all kinds of solid waste proposals. And it is now official: a third HHW Day grant has been approved. HHW Day 2012 will be held Saturday, April 28, 2012 at the Camdenton High School parking lot from 9 am until 2 pm (or until we run out of room/money).

SAVE THE DATE: LOWA's next:

HOUSEHOLD HAZARDOUS WASTE RECLAMATION DAY SATURDAY, APRIL 28, 2012

Tell all your friends and neighbors to start gathering all their household hazardous waste.

Education/Outreach – Carolyn Solomon is LOWA's new Education/Outreach Chair and is settling right in, organizing volunteers for the many presentations and booths at events all around the Lake. In the last few months, LOWA has had booths promoting the LOWA LILs Project at The Shootout and at LOWA's Clean Water Festivals with the 2 Dam Days kayak and canoe extravaganza Paddle Races. More volunteers are needed to help LOWA be at even more lake area events. Please contact LOWA at 573-434-4400 or sign up online at www.sosLOWA.org. In addition to booths, LOWA has also been busy with students of all ages. Educational events with a Columbia College Environmental Science class, a group of home schoolers from Versailles and a group from Eldon discussed healthy watersheds and explored water quality monitoring with the water chemistry portion of the MO Stream Team program. The home schoolers also participated in an interactive watershed game where the students role-play being plants, rocks, and raindrops and discover the importance of having plants along the shoreline of the lake or the stream bank in slowing down stormwater runoff and filtering out the pollution, soil, and debris that runoff often carries. And let us not forget that adults can be life-long learners. LOWA loves to come present to lake area clubs and civic groups about all of our different programs aimed at keeping our beautiful Lake of the Ozarks healthy! Just call LOWA at 573-434-4400. Online is also a place to sign up as a volunteer or to be on LOWA's email list for notices of events at www.sosLOWA.org.

LOWA LILs – Kathy Fayant Chair - Kathy alluded to the earlier description of what a LOWA LIL is and then discussed simple things anyone can do to reduce erosion. First is to mow higher. When mowing the lawn, mow high enough to leave the grass 3-5 inches tall. Taller grass not only has a deeper root system and is generally healthier, but taller grass also catches more soil being washed away by runoff, and it slows the runoff also. Soil tests are important too. Soils tests let you know whether or not you need fertilizer, and if so, what kind and how much. LOWA's Trained Volunteer Evaluators (TVEs) are trained and ready to come out and do a soil sampling for a soil test for you. Again, healthy plants mean less soil erosion. Then Kathy discussed why the upper reaches of the Niangua Arm have higher amounts of nutrients. The water is much shallower in the upper reaches and less water means less dilution and more concentration and so the phosphate levels measure higher in the upper reaches, but what happens in the upper reaches does flow down to the rest of the Niangua Arm so it is important to look at all parts of the Niangua Arm in the watershed management plan.

LOWA Paddlers – Barbara Fredholm – Barbara, who is also LOWA's Historian, has agreed to take the helm on the LOWA Paddlers and hold a couple of kayak and canoe "paddle arounds" this fall at Ha Ha Tonka spring area. Don't have a kayak or canoe? Don't know how to paddle? People love to share and teach. Come and learn this Saturday, October 22 at 2 pm at the Spring Picnic Shelter. Contact LOWA to find out more information. Just call LOWA at 573-434-4400 or online at www.sosLOWA.org.

2 Dam Days – Alice Walker – We had a great race this year with 54 paddlers in all between all of the different races, with the Main Event, Dam to Dam, hosting 26 racers. Next

year, says Donna Swall, event co-chair, we hope to have the “Guinness Book of Records” longest air horn line. As the first racer comes by your dock, blow the air horn, and the people in the next dock down the way will hear you and blow theirs! But really we do need lots of volunteers out on their own boats protecting the kayakers and urging fellow boaters to slow down. Saturday we need these safety boats from Drake Harbor in Warsaw at Truman Dam, down to Captain Ron’s at the 34 mile marker. Then Sunday, we need the safety boats from the 34 mm to the end at Bagnell Dam. Evaluations and plans are already underway for 2 Dam Days 2012. If you want to help in making those plans, just call LOWA at 573-434-4400. Online is also a place to sign up as a volunteer for 2 Dam Days at www.sosLOWA.org.

The LOWA Forum – A Round Table opportunity to voice questions, concerns, or comments.

How is LOWA positioning about FEMA and FERC?

[Secretary’s note: FEMA – Federal Emergency Management Agency - is about the flood plains and FERC – Federal Energy Regulatory Commission - is about the structures that are on Project Boundary land]

Warren Witt, Manager of Hydro Operations for Ameren Missouri and also on LOWA’s Board of Directors, answered. These are both water quality issues. FERC is there to protect the environment. Managing development is important. But, LOZ was already developed before regulations were enforced. LOWA supports the homeowners and their properties so long as they are not affecting power generation or polluting the lake. There is a petition out there to limit FERC on what it can or cannot do. Undeveloped lakes should keep their green spaces but LOZ has been developed for too long and to require it be removed would be too much of a hardship. LOWA supports the rehearing and reevaluation of the FERC issue. Jeff Green and Bryan Vance manage the shoreline for Ameren Missouri. FERC will be reevaluating and meeting with Ameren Missouri.

The FEMA flood plain – why did it change the flood levels? FEMA does reevaluate periodically. They were not just picking on this area either, they were looking at a very large area and not just the Lake area.

Grandfathering – would grandfathering carry over if sold or inherited? Ameren is looking to move some land outside of the Project Boundary forever so it wouldn’t even be grandfathered. Then after that, grandfathering and Ameren’s proposal would carry on after sales. But a person couldn’t add to or increase the structure.

Floodplain – homes there now are still subject to flood insurance requirements. A person can still hire a surveyor to see if the house is above the flood plain, and can apply to be removed from the flood plain if the survey shows that. Can you rebuild if damaged by a natural event? Probably, but not if more than 50% damaged.

To find out whether you are on Project Boundary, contact the Shoreline Management Office for Ameren Missouri, Jeff Green or Bryan Vance.

Meeting adjourned by Donna Swall 8:45 PM. Next meeting Nov. 21, 2011 at the Sunrise Beach Firehouse on Porter Mill Spring Road, 5-32.

These minutes respectfully submitted by LOWA Recording Secretary, C. King Toole.
Donna Swall, LOWA Exec. Director has read these minutes and submits to board for approval.
Upon majority vote they will be sent to membership.