

Lake of the Ozarks Watershed Alliance (LOWA)

Public Meeting Minutes for 6/16/2008

TanTarA Northwinds Room

The June 16, 2008 LOWA public meeting was called to order at 6:40 pm by Donna Swall, LOWA Executive Director. Donna introduced herself and then thanked everyone for coming and for their caring. Introductions were made Round Robin and then Donna read the LOWA Mission Statement.

LOWA Mission Statement

Citizens will preserve, protect and improve the Lake of the Ozarks, its watershed and natural resources while maintaining our economic, social and environmental health.

Bob Broz, MODNR, Why Soil Erosion is So Important to the Lake's Economy. Or, perhaps this should be titled, Why a lack of soil erosion is so important to the Lake's economy.

Erosion refers to the movement of materials and there are 5 basic types of erosion. The first is called splash erosion and refers to the impact of the rain drop itself on a spot of bare soil. This impact knocks loose some particles of soil from the surface and often begins the whole process of the movement of soil. A second type of erosion is sheet erosion and this refers to a large area of soil that comes off and moves a top layer, or sheet, of soil, often off of a field. So a field may lose the top quarter or half inch of soil right off its top in sheet erosion. Sheet erosion often begins as splash erosion with rain drops hitting the exposed soil of a field. If the rain comes down too fast, the rain can't soak down through the soil fast enough and water builds up on top of the soil. When that water starts running off down any kind of slope, even slight, the water will take with it the soil particles that have been loosened by the splash erosion. Once water is running, then the force of running water begins to knock off particles of soil as well. Slope of the field, amount of rain, type of soil, and force of impact are a few of the many factors involved in how much erosion occurs on a particular site during any particular storm. A third type of erosion is called rill erosion. A rill is a small channel, run off cut, or ditch – a small rivulet that begins to form as waters collect and flow. A rill is small enough to walk or drive over but the fourth type of erosion, gully erosion is larger. A gully is too large to walk or drive over and generally forms from rills, given enough time, water, etc. The fifth type of erosion is stream erosion. One might say a stream is a very large gully. With an increased volume of water and an increased velocity, the water is capable of cutting more, becoming a stream. Then the question arises, what happens where a stream meets a lake? Storm events can cause excessive gouging and cutting of lake shores and bottoms in the areas where a stream meets a lake. And then what are the consequences of that?

A typical construction site loses 100-200 tons of soil per acre per year, on average. And a typical corn field loses 4-8 tons of soil per acre per year, on average. Each type of area has soil conservation practices that can be followed to minimize soil erosion. On the construction site, LID (Low Impact Development) or Best Management Practices (BMP's) such as silt fences can be used, but every type of soil conservation practice, whether construction or farming, needs to be done correctly in order to be effective. And

even after being installed correctly, the practices must be maintained properly. For example, with silt fences a trench must be dug and the material put into the trench or silt will go under the fence and you can't let water go over the fence, either. And the silt fence needs to be checked and maintained on a regular basis and after large storms. If one looks at the lake water next to a construction site after a storm and compares that color to water not near a construction site, the contrast can be striking and very evident from the air. Soil in the water destroys the macroinvertebrate life which is the food base for the fish. Soil also plugs channels and deposits sediment where it shouldn't be. Some factors which influence soil erosion are climate, rainfall, soil erodability, length of slope, steepness of slope, and the act of not doing anything. Criteria need to be set with all kinds of areas in mind. Under Control Principles one should protect the land surface, keep run off velocity low (berms and sediment fences), capture sediment on site, schedule land grading in increments – only clear parts to be worked on first and then come back and clear off the rest as you get to that part, maintain the install practices so they stay usable, determine grading limits, drainage areas, use grass filter strips, berms, etc. to redirect water, and collection basins. Some information on BMP's can be found at <http://www.epa.gov/npdes/urbanbmptool/> and at <http://extension.missouri.edu/explore/agguides/agengin/g01509.htm>

A Stormwater Phase II plan should be a part of a Watershed Management Plan
How does Stormwater mis-management affect the larger watershed area? Everything we do affects the water quality of the Lake. What does LOWA need to do to help people realize the importance of their activities? Fishermen and boaters can be affected by too much sediment loading in terms of the disappearance of fish and the changing of channels. The Environmental Protection Agency (EPA) can impose a fine of \$10,000 per day for everyday that BMP are not being followed but this fine is a last resort and EPA will work with companies to get those practices in place.

Sediment is the #1 water pollutant in MO. Soil (sediment) can contain nutrients and heavy metals – not just dirt (which is bad enough!). LOWA's role becomes to raise awareness about protecting the Lake of the Ozarks and along these lines, soil erosion is a BIG issue! To report concerns, citizens can contact their county planning and zoning office (Camden Co. is the only one of the 4 counties bordering the Lake of the Ozarks that has P&Z) or citizens can contact the regional MODNR office, which for this area is in Springfield. That office's telephone number is (417) 891-4300. LOWA will try to create a link on the LOWA web site where citizens can report spots of soil erosion at the Lake of the Ozarks.

Kimberlee Foster – Platte Land Trust – Soil Erosion Incentives: A Low Impact Development Evaluation System

Partnerships are critical with enforcement of land disturbances and stream protection. It's important for LOWA to develop partnerships to help be proactive about such disturbances. Kimberlee's watershed group's goal was to try to minimize the impact inevitable land development was going to have on Brush Creek, a stream in the north Kansas City area, an area of very rapid development near the Kansas City International Airport. They were funded through a nonpoint source pollution grant, Section 319 Grant Funds of the Clean Water Act. A nearby creek, Rush Creek, was built and now the city of Parkville is spending over \$2 million to minimize damage being done where Rush

Creek meets the MO River. So, this project, the Brush Creek Mid-Shed Project, is trying to avoid that by being proactive and working with construction and development folks to implement Low Impact Development (LID), as well as citizens and home owners in projects, such as rain gardens, that can be implemented on smaller scales. A rain garden is a shallow depression in the yard or by the house designed to collect water temporarily so rain water can soak into the ground instead of running off. Rain gardens are engineered to drain within 24-48 hours so they are not wetlands and rain gardens do not stay wet long enough to breed mosquitoes. Rain gardens stay planted with hardy types of plants, including many different flowering plants, so they can be a place of beauty as well as a water conservation practice and, because they stay planted, rain gardens slow down runoff and reduce soil erosion. The Brush Creek Mid-Shed Project goal is to minimize the impact from development by getting developers to implement Low Impact Development (LID) techniques throughout the entire area of mid-watershed focus. They defined LID as “an ecologically friendly approach to site development and storm water management that aims to mitigate developmental impacts to land, water, and air.” LID principles include integrating site design and planning techniques with Best Management Practices. To do this, the project worked to change some of the policies and regulations for stream to better protect the stream, educated stockholders about protection strategies, and implemented an incentive program aimed at both the homeowner and the developer. LOWA would like some kind of recognition program for builders and developers around the Lake which would recognize good LID strategies. Part of the Brush Creek Project is an evaluation system, LIDES (Low Impact Development Evaluation System), to recognize and provide funding to implement BMP’s. LIDES has limitations, but basically the evaluation system gives each criterion a zero standard, which is all ordinances and laws are being followed. The site being evaluated is then scored based on whether they are doing more than that standard or less than that standard. Each criterion has its own standard and sites are judged on about 9 criteria in 3 main categories: site design, storm water management, and protection of natural resources. The total score on this evaluation determines the cost/share percentage for the project. A cap on the total that can be collected back in the cost/share is determined by the total acreage of the site. For example, the maximum is a 75% back for scoring in the highest range, platinum. Then, if the site is more than 20 acres, then project can receive as much as \$50,000 back on their costs. You can get more information on this project at www.plattelandtrust.org, email them at plattelandtrust@yahoo.com, or call them at 816-778-0570. Information on designing, establishing and maintaining a raingarden can be found at rainkc.org.

If you have a concern about soil erosion or other environmental concerns, the phone number for the Springfield regional DNR office is 417-891-4300. Please call them.

LOWA handed out well water sample bottles for people who wanted to get their well water tested. Instructions were included.

LOWA is partnering with AmerenUE to host 2 LID workshops for builders, developers, real estate people, architects, and anyone else that works with the development around the Lake of the Ozarks. Keep posted for dates and times. Anyone who wants to get on the list, please contact LOWA. The LOWA part of the Lake of the Ozarks watershed is

over 886,000 acres. LOWA needs everyone's input and help in protecting our beautiful Lake of the Ozarks. Our Lake One Voice. Let's work together.

Water Quality – Greg Stoner Last year's water testing for *E coli* bacteria was such a great success in large part to the work of the LOWA volunteers. What began as a 20 site study blossomed into a 120 site study and LOWA received an award for their excellent contributions to the study. This year's study is going well and there are enough teams and enough couriers. A high level in this study is a count of over 126 bacteria colonies per 100 mL of water. The purpose of the project was to find if there are areas of concern and also to build public awareness. In 2007, 5 sites came back with high readings and a couple were high multiple times. One area actually had a water treatment plant malfunctioning and that has been fixed. In 2008, 2 of those sites from 2007 and a new set of sites in the Lake are being tested. In May of this year, 3 of the 55 samples came back with readings over 126. There had been lots of rainfall which can result in artificially elevated levels of bacteria. One needs to look at the whole season's sampling, dry times, wet times, etc. because there are so many variables affecting the levels. This study has shown people can stress the Lake, but for the most part, the Lake of the Ozarks is still healthy. And, that is all the more reason to be proactive with protecting the Lake. Lots of development is coming.

McDuffy Labs will give citizens discounts on testing the water at their own docks – go to the LOWA website at www.soslowa.org for more information.

Round Table Citizens Speak:

It seems there are not enough personnel to enforce rules and regulations. Different areas have different amounts and types of regulations, but not enough enforcement of the regulations that are there. We can all see construction sites that are letting lots of soil erode into the Lake, but there are few people to be out there who have authority. The best we can do is call the regional number for DNR and report what you see. Also call AmerenUE and call Ameren if you see debris going into the water from that site. Ameren's number is the Lake Protection Hotline at (573) 365-9203. AmerenUE also has a toll free customer service number at 1-800-552-7583.

Construction sites, Ameren, all have to submit Pollution Control and Erosion Control plans that are public knowledge and kept on file. People who see problems should report them to Ameren and to DNR.

If you live in Morgan and Benton County, look for Announcements to attend septic tank demo with free dinner & sign up to get your septic tank pumped out with a discount. Contact LOWA.

LOWA needs an Historian and a Hospitality Chair. Step right up!!

LOWA needs volunteers to help out at the LOWA table – this really is fun! – at:

- Cap'n Ron's Shoot Out Aug 24
- Fall Fest Sept 6

➤ Versailles Apple Festival – this fall

Next Meeting Aug 4th Benton County Truman Dam Visitors Center. Free Dinner at 5:00 and Septic Tank Maintenance Workshop 5:30-6:30 pm.

August 18th Morgan County –Olive Branch HWY 5, Gravois Mills.. Free Dinner at 5:00 and Septic Tank Maintenance Workshop 5:30 to 6:30

Also, both Benton & Morgan County Residents on septic tank may sign up for discount to pump your septic tank.

This is provided to you by LOWA through a grant from DNR.. Get Pumped!!

Many Thanks to Camden County residents for making our Septic Pump Out Program a Great Success!

These minutes respectfully submitted by C. King Toole, LOWA Recording Secretary and approved by Donna Swall, LOWA Executive Director.

Post Information: The July and August regular LOWA meetings have been changed to accommodate special septic tank pump-out and lecture meetings as shown below:

Benton County:

Dinner/Demo will be Monday Aug 4, 5:00 pm at the Truman Dam Visitor's Center

Morgan County:

Monday, Aug 18 5-7 PM The Olive Branch On Hwy 5 in Gravois

Monday, Sept 8 5-7 PM Rocky Top On O Road

Saturday, Sept 27 11:30 AM to 1 PM Osage River Bar & Grill In Laurie on Main S