

July 13, 2009 LOWA Meeting Minutes

Lake of the Ozarks Watershed Alliance (LOWA)

Public Meeting 7-13-09

Tan-Tar-A Crystal Ballroom

LOWA Executive Director, Donna Swall, opened the meeting at 6:30 pm with a welcome to all and a round robin of introductions through the entire audience. Over 60 people were on hand to join in an evening of information, questions, and commentary about the Lake of the Ozarks (LOZ). Donna Swall then passed around the plaque to LOWA from Missouri Department of Natural Resources (MDNR) commending LOWA volunteers for an exceptional job working with MDNR collecting the water samples used in the 5-year *E. coli* study. Because LOWA volunteers were on hand to be trained and mobilized on collection days, the on-going study has been able to collect and analyze 3 times as many samples as were originally budgeted and planned. Donna then pointed out the LOWA banner on display, created and donated by Realty Executives Executive Director Jim Rogers. The LOWA Mission Statement was then read:

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.

Caroline Toole then queried the audience as to how many had heard about the CNN news article listing Osage Beach, MO and Lake of the Ozarks as being the #4 most popular and healthiest lakes/lake community in the entire USA.

A Household Hazardous Waste Grant has been awarded LOWA from MDNR for \$23,000. LOWA will be hosting a **collection day October 10th at the Camdenton High School Parking Lot**. More on that later.

Featured Speakers

1. Eddie Hedrick, Department of Health and Senior Services “Understanding *E. coli* and our Lake” and “Swimmers Safety Tips”

First to speak was **Eddie Hedrick, Department of Health and Senior Services**, Bureau of Communicable Disease, Department of Control and Prevention, Emerging Pathogens Coordinator, on “Understanding *E. coli* and our Lake” and “Swimmers Safety Tips”. All water has microorganisms – water is not sterile (microorganisms are living creatures that are too tiny to see without a microscope). Our Lake water is not sterile and lake water always will have microorganisms in it. The key is how many and what kinds of organisms. Most microorganisms do not cause disease and have no impact on human health. Disease usually results from bacteria, viruses, or protozoa. These organisms often live in the GI tract (gastro-intestinal, your ‘guts’) and they are found in the feces of warm blooded animals. There are many, many types of *E. coli*, which stands for

Escherichia coli, and *E. coli* is a common bacterium in not only the intestines and feces of warm-blooded animals, but in humans, as well. For the most part, having lots of bacteria in one's intestines is a very good thing. Bacteria are necessary in your intestines. They help digest food and some even produce needed vitamins. Out of over 100 strains of *E. coli*, only 4 are really pathogenic (disease-causing). Some of the diseases caused by the pathogenic strains of *E. coli* include gastro enteritis, UTI's (upper GI tract infections), neonatal meningitis, hemolytic uremic syndrome, peritonitis, masitis, septicemia, and pneumonia, and many of these diseases don't even occur except in individuals whose immune system is already compromised for another reason. *E. coli* can only live short time out of its normal environment so it is a good test for fecal contamination. These tests are only for how much bacteria is present, not for which type. If tests show the presence of too much *E. coli* bacteria, then there may be a problem. Too much bacteria shows recent fecal contamination, but the test does not show from what source. In order to determine which strain of *E. coli* and from where that bacteria came (eg, wildlife or human), many more, different, and expensive tests must be run. Other pathogens could also be present when large numbers of *E. coli* are present. Other organisms include: cryptosporidium, noroviruses (one of the largest causes of water borne illness), Hepatitis A, Shigella, 0157 *E. coli*, Salmonella, and Giardia.

So, when tests show a high level of *E. coli*, that means we need to take another look at that water, retest, see if levels remain high or was that high spike in readings just momentary. Two very important precautions everyone who likes to enjoy the water can always take are: 1. Take "No Swimming" signs seriously; and 2. When swimming, keep your mouth closed, and tell kids the same. The standards used when looking at testing results are based on statistics. For example, they would look at how many people got sick when the levels of bacteria were at different heights to come up with a level that produces minimal illness.

2. Dan Sabourin, RN, MBA, Lake Regional Hospital "Infectious Disease Data"

Dan Sabourin, RN, MBA, Lake Regional Hospital, Infectious Disease Control Division, was up next to speak about "Infectious Disease Data" in the form of syndromic surveillance, and what the history of trying to deal with disease outbreaks has been. Disease control divisions use syndromic surveillance for outbreak detection and to guide public action during an outbreak. Syndromic surveillance tries to pick up on an outbreak early using statistics and spikes in occurrences. Communities often respond to outbreaks once the outbreak is already underway. In the old days, says Dan, people like him would run around saying, "Did something bad just happen?". Now, disease control people are better at figuring out what is happening sooner. As little as 5 years ago, disease control people were doing a post-event medical record review to compare different illness complaints over a period of time to see if an outbreak is occurring or had occurred. One draw back of this method is that most people do not seek medical treatment. Lake Regional is now at the stage of syndromic surveillance called Collated and Faxed Batched Data. In this program, when people come in with an illness, the hospital reports that to the health department. We are still only finding out about the outbreak once it is underway. Phasing into an electronic monitoring system called

ESSENCE, should help to provide real time monitoring and could even include parameters like having the drug stores report larger than normal sales of certain OTC's (over-the-counter medicines). In January, Lake Regional Hospital hopes to become part of a daily sending of data to the health department and as this improves, they will then be able to send real time notices to the health department. The ESSENCE program could even, one day, provide a warning of an impending outbreak based on the amount of specific OTC's being purchased in a community.

All systems are supported by common sense. If it seems too many of your friends are getting sick, report it. When asked if the hospital noticed any more illnesses than usual when the *E. coli* levels were so high, and Dan said he checked the numbers for those dates and the number of gastrointestinal illnesses has been about the same this year as in other years so the high test results from the rains did not seem to affect the number of reported illnesses. In response to another question, all restaurants are required to have their water tested for bacteria.

3. Earl Pabst, MDNR, Director Division of Environmental Quality Overview of the 5-Year Lake of the Ozarks *E. coli* Study

Earl Pabst, MDNR, Director Division of Environmental Quality gave an overview of the 5-year Lake of the Ozarks *E. coli* study. Missouri has 275 water bodies on the Environmental Protection Agency's (EPA) Impaired Waters List (303d). The Division of Water Quality works on all of them but MDNR needs help at the local level to address impairments. This is the 3rd year of a 5-year study on *E. coli*. High levels of *E. coli* have occurred over the last 2 years and this has often been associated with wildlife. Last week another sampling took place and this time only one cove showed high levels. Previous samplings this season (2009) showed over half the coves with high levels. These kinds of spikes occur after high rainfall events all across the state. Instead of waiting for the end of the 5-year study, MDNR is being pro-active with LOWA to work with the data as it comes in and look at all incidences right away, retesting and not waiting until the next round of sampling. Things to look at are coves with elevated levels not related to rainfall events. MDNR is working with LOWA to decide on plans. Some issues are from possible agricultural sources and SALT areas working on water quality issues in the upper parts of the LOZ watershed. MDNR is trying to be proactive in addressing water quality issues. Long range plan options being looked at include regionalization and clustered systems for waste water. The Department, says Earl, is committed to working with LOWA and citizens for promoting water quality. In response to questions, any land disturbance over one acre must be permitted by MDNR. For other NPS (nonpoint source pollution), like runoff from agriculture, MDNR has no authority. The Department of Health and Senior Services has responsibility for systems that drain sewage into LOZ. MDNR has regulatory responsibility for permitted treatment plants and for when a failing site can be identified.

4. Steve Fischer, US Army Corps of Engineers, Kansas City Division "Bacteria Testing Overview of Select MO Corps Lakes"

Steve Fischer, US Army Corps of Engineers, Kansas City Division spoke next on “Bacteria Testing Overview of Select MO Corps Lakes”. The US Army Corps of Engineers has 5 regions over the state. The Corps monitors some of the beaches of its lakes, MDNR monitors some, and some county parks departments monitor some. If any test fails, that site is retested to see if it is still high. Steve pointed out that in the testing community, there are some concerns over how we monitor for bacteria because there is no protocol or guidance from EPA. Also issues like what are the sources of the bacteria, and does wildlife *E. coli* make people sick are of concern. LOWA is starting to try to do source tracking of high *E. coli* events. Other Corps lakes sampled after high rainfall events had high bacteria in 4-7% of their samples.

Algal toxins, chemicals given off by some algae during algal blooms, can make people sick also. High temperatures and no wind can lead to high concentrations of microcystins even without an actual algal bloom and that can also make people sick. Wet periods bring elevated levels of bacteria and the levels return to normal in 2-3 days following the rain event. When asked if water coming out of Truman Lake can bring *E. coli* into LOZ. Steve said that when *E. coli* levels are high in Truman Lake, that water is held back for 5-7 days so that when it is released, it will not be a problem for LOZ.

LOWA Executive Director Remarks

Donna Swall remarked that the Lake of the Ozarks is healthy. And, it is under our control to keep LOZ healthy. We can do things to help keep runoff from getting into the Lake during periods of high rainfall. We need to keep testing and monitoring areas with old systems, new systems and all around the Lake. This is all part of being proactive and keeping the Lake of the Ozarks healthy.

Committee Reports

Lake Safety, Carroll Vogel – LOWA started the Designated Captain program to help keep alcohol consumption down while operating a motor boat and now the Water Safety Council for LOZ runs the program. Participants get a floating key chain that they can show to any participating restaurant, bar, etc. and receive a complementary nonalcoholic beverage. They also get a brochure explaining the program with a map showing the participating restaurants and bars. Water Safety Council will be updating the brochure soon. A new problem with water safety is people becoming intoxicated at home, falling off their docks and getting hurt or drowning.

Recycling, Gaye Belloir – **Get ready to recycle your Household Hazardous Waste on October 10, 2009 at the Camdenton High School parking lot.** About 30 more volunteers are needed! Call 573 434 4400 to sign up or go online to www.soslowa.org. Don't delay! Do it today! Tell weekenders – get their materials from them since they may not be here that day! In addition to taking household hazardous waste like old paint cans with small amounts of paint still left, solvents, paint thinners, insecticides, pesticides, herbicides, cleansers, and poisons, this collection will also take old electronics. Gaye also says that the Osage Beach WalMart has bins in their front

lobby available 24/7 to collect paper, plastics, and aluminum. Restaurants, resorts, and other businesses with large amounts of recyclables should contact WalMart about collection of large quantities.

Lake District Plan, Doug Beck – The Lake District Plan (LDP) is the watershed management plan for the 4-county Lake of the Ozarks watershed. The 4 counties are Miller, Benton, Morgan, and Camden. The LDP will be used on an on-going basis to work with the changing needs of the LOZ watershed. The LDP includes program planning, implementation, and evaluation and will look very strongly at NPS like plant nutrients in the water and sediments and at their sources. In looking at development and growth over the 4-county area, the LDP will assist communities in management and growth issues and will be able to provide suggested guidelines. LOWA is partnering with LOZ stakeholders to insure good water quality is maintained. It is imperative to get a watershed management plan (LPD) in place to help municipalities and communities with water quality issues. Proactive support will help keep the Lake of the Ozarks healthy and input from all stakeholders is needed. Be active, be heard. Our Lake One Voice. Once the LDP is submitted, LOWA can apply for various grants which will help in funding the many projects already going and fund future projects, all aimed at maintaining a healthy watershed and a healthy lake.

Education Outreach, Christy Fera – LOWA is always in need of helpers to man booths and tables at area events. This spring, LOWA filled in for the Water Safety Council (WSC) in manning tables during the spring Harbor Hop. LOWA was promoting WSC's Designated Captain Program which tries to keep the ship's pilot sober and thus, keep our Lake safer. For more information on the Designated Captain Program, please go to www.soslowa.org. Upcoming plans for tables at events include the Shoot Out and the Fall Festival. LOWA celebrated Earth Day with the 5th graders at Osage Upper Elementary with hands on water quality activities to promote clean water.

Stream Team, Caroline Toole – Monitoring streams in the watershed is important because the streams feed into the Lake of the Ozarks. Anyone interested in participating in a water quality monitoring event at an area stream, please contact Caroline Toole through the LOWA phone at 573 434 4400 or online at www.soslowa.org.

Waste Water, Jim Rogers – There are lots of old systems around the lake and many houses that were once weekend homes are now permanent homes and this trend will increase as the boomers retire. The 4 County Lake District Plan will guide people and communities to build treatment plants all around the Lake. Schultz and Summers Engineering, Inc. (SSE) are donating time and skill to Phase II of a regional waste water treatment plan. A committee is now forming, chaired by Jim Rogers, to explore the many options available to the LOZ watershed.

Lake Shoreline Clean Up, Bev Tebis – LOWA volunteers cleaned 7.5 miles of shoreline during the spring Lake Shoreline Clean Up campaign.

**The next LOWA meeting is September 21, 2009 at Old
Kinderhook.**

Meeting adjourned at 8:30 pm.

These minutes respectfully by C. King Toole, LOWA Recording Secretary.