

Water Quality Update

Newsletter of Extension Water Quality Programs

February/March 1999

Eco-Camp

We're looking for a few good men..... women, boys, and girls. The Eco-Camp experience is available to students from the eastern half of the state. Now in its third year, the 1999 edition of Eco-Camp has been scheduled for June 9-11 at Victor Group Campground at Lake Wister. The camp offers students ages 14-19 a unique opportunity for hands-on exploration of the complex issues of agriculture and environmental protection.

Eco-Campers tour poultry and swine facilities and talk with the operators. In addition, scientists show the impact such operations can have on the environment. Campers will also learn best management practices that producers use to reduce this impact.

The campers develop valuable conflict resolution skills as they put their new knowledge to use, with each person playing a role as a member of a community addressing environmental concerns.

Just so all this learning doesn't scare everyone off, there is also plenty of opportunity for recreational activities like swimming, movies, and basketball. The camp experience includes meals, snacks, lodging, recreation and a T-shirt. Registration is only \$25.

In addition, we need six teachers to serve as Eco-Camp instructors. This involves attending a day of training prior to the actual start of camp and serving as a facilitator during camp. Extensive

environmental knowledge is not required, just genuine interest. Selected teachers will receive a \$25 honorarium. For more information, including a look at a new promotional video, students and teachers should contact their county OSU Extension Office or visit our web-site at www.okstate.edu/OSU_Ag/oces/ecocamp. ♦

Surf's Up!

Here's a listing of web sites where more information can be found on the topics discussed in this newsletter, or where you might be able to find something useful or at least interesting. ♦



- www.reeusda.gov - Water Quality Projects
- www.eli.org - Environmental Law Institute-Enforceable NPS laws
- www.npwrc.usgs.gov - Northern Prairie Wildlife Research Center
- www.mncourses.missouri.edu - Online Household Hazardous Waste Certification Course
- www.cnie.org - Committee for the National Institute for the Environment - Congressional Research Reports
- www.enn.com - Environmental News Network
- www.nrcs.usda.gov - NRCS homepage
- www.agpublications.tamu.edu - Texas A&M Extension Service—online fact sheets, good ag-related clip-art
- www.science.wayne.edu - zebra mussel research
- www.ufrcg.gov/zebra-mussel - more zebra mussel research
- www.dewa.com/plate - clip-art license plates
- www.uswaternews.com - view current and past issues of U.S. WaterNews on-line

Nebraska Says No

The Central Interstate Low-Level Radioactive Waste Compact Commission, made up of Oklahoma, Kansas, Arkansas, Louisiana, and Nebraska, is now back to square one in its location search since Nebraska denied license for construction of a low-level radiation waste facility in Boyd County. Many of the reasons given for denial pertained to water quality. It was stated that the site lacks sufficient depth to the water table to ensure that groundwater intrusion would not occur. The site also lacks an adequate buffer zone between the facility and the local aquifer to provide adequate dimensions to carry out environmental monitoring activities and take mitigative measures. Furthermore, the water table is at or above the surface elevation at various points on the site. Finally, after site closure, it is likely that groundwater will infiltrate the facility's leachate collection system, which would require pumping, prohibited by regulations. ♦

Excerpted from TX and SW Environ News, Dec 1998, 8(9): 1,23



500 Evacuate Cushing

As part of a nearly \$6 million cleanup effort, the EPA and ODEQ evacuated almost 500 residents of Cushing, OK while more than 6,000 gallons of hydrofluoric acid were removed from a leaking tank at the city's former Hudson Refinery. According to state officials, the project, headed by *Ecology and Environment*, was the largest transfer ever of this chemical. Final disposal has not yet been accomplished, the action being only a temporary relocation to safe containers. The process took 11 hours and no problems occurred. ♦

Excerpted from TX and SW Environ News, Dec 1998, 8(9): 1,23



Zebras in Oklahoma?

The zebra mussel (see p. 4) is making its presence known in the waterways of eastern Oklahoma. The volunteer monitors of Oklahoma Water Watch will join in the efforts of the Zebra Mussel Task Force, coordinated by the Army Corps of Engineers and the Oklahoma Department of Wildlife Conservation, to report any sightings and to collect samples for identification. All Oklahomans can help prevent the spread of zebra mussels by thoroughly rinsing boats and equipment with hot water before leaving a water body. ♦

Excerpted from Oklahoma Water Log, Winter 1999

ORWA Technical Help

The Oklahoma Rural Water Association (ORWA) is offering technical assistance to aid the state's water systems. Gene Whatley, director of ORWA,

says this occurs in three ways; capacity development, small system water treatment, and source water protection. The goals of the program are to help

ensure compliance with state and federal regulations and to improve drinking water quality state-wide. For more information, contact Gene Whatley at 405-672-8925. ♦

On Tap, Fall 1998, 7(3): 1, 19

ORWA Financial Help

The Oklahoma Rural Water Association Finance Corporation (ORW AFC) has been formed to provide low interest funds to assist rural water districts and small communities for construction projects. In conjunction with Kilpatrick Pettis, the ORW AFC has created an interim construction loan program to provide funding for systems that have received a permanent loan commitment from USDA Rural Development. The effective rate of funds is estimated at approximately 1-3%, depending on the timing of disbursements. For more information and/or an application form, contact Gene Whatley or James Gammill at 405-672-8925. ♦

ORWA Update, September 1998



INVASION!

By now, most of us are aware of the zebra mussel problem, and that doesn't refer to some rare muscular disorder affecting an African herbivore. It refers to a small thumbnail-sized member of the phylum *Mollusca*, native to the former Soviet Union's Caspian and Black seas. With no native parasite or predator, and with the capability of releasing one million eggs every reproductive event, the mussels have quickly spread throughout the waterways of the eastern US and Canada, including the Great Lakes and the Mississippi River Basin, even Oklahoma (see p. 2).

The zebra mussels threaten native ecosystems by outcompeting other organisms for phytoplankton, a building block of aquatic food chains. Adult forms attach themselves with strong threads to hard surfaces, including other freshwater mussel shells, hampering those animals' eating, breathing, and reproduction.

The mussels also pose an economic threat, as they can clog water intake pipes at electrical utilities, municipal water supply treatment plants and industries that use lake water for their processes. They also can plug pumps, encrust on boat hulls and damage boat engines. The US Fish and Wildlife Service expects zebra mussels to cause \$5 billion in damages by the year 2002.

One particular species has greatly increased the rate at which the zebra mussels are spreading. Jeff Hieb, a Wisconsin DNR research biologist and former assistant coordinator for the Zebra Mussel Watch Program in that state says that "the only way adult mussels can get out of water and move across land to a new water body is with the help of humans."

Adult mussels are carried on the hulls of boats while the free-floating juvenile forms can be transported in live wells, buckets, engine compartments, and any-

where small amounts of water collect. Education efforts to help insure that

The zebra mussel, *Dreissena polymorpha*



"anything that comes from a lake stays at that lake" have done little to abate the spread of the invading mussels. However, help may be on the way from a very unexpected source.

The New Mexico Institute of Mining and Technology and the Indiana-based Aquatic Research Institute recently announced that testing of a new mussel repellent containing capsaicin has been successful.

Capsaicin is the compound that puts the 'hot' in hot pepper. Habanero peppers, 60 times hotter than jalapenos, have been used as a source for this chemical. Mixed into caulks, paints, glues, and rubber coating materials, the repellent has resulted in "substantially reduced and often temporary attachments by mature adults on moderately 'hot' materials and no attachment on the hottest materials."



The repellent forms a molecular bond with surfaces so it is long lasting and it has been shown to be effective against other pests including rats, birds and insects. Further testing for toxicity, cancer risk, and reproductive harm may have to be done before the repellent is marketed. ♦

Excerpted from Wisconsin Cooperative Extension Service, "Keeping Current", Oct/Nov 1998, and US Water News, Nov 1998.

If you need a copy of any articles, contact Tori Riggs at (405) 744-5653 or rtori@okstate.edu.

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ADDRESS CORRECTION REQUESTED

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DATELINE

April 17-22, 1999 – Southern Region Water Quality/Waste Management Workshop: Working Toward Solutions- Sheraton Capital Center Hotel– Raleigh, NC - Registration is now \$150 since the March 17, 1999 deadline has passed. Contact person is Bonnie Teater with the Southern Rural Development Center, Box 9656, Mississippi State University, MS 39762, ph: 601-325-3507. *See you there!*

May 5, 1999 – Riparian Area Management Workshop in Binger. Register with the Caddo County Extension Office at 405-247-3376.

May 19, 1999 -- Riparian Area Management Workshop in Altus. Register with the Jackson County Extension Office at 580-482-0823.

June 9-11, 1999 – Eco-Camp, Victor Group Campground, Wister Lake. Registration forms may be obtained from the web at www.okstate.edu/OSU_Ag/oces/ecocamp, or by contacting Joe Bullard, Water Quality Educator, LeFlore County Extension Center, P.O. Box 430, Poteau, OK, 74953-0430. Forms and \$25 registration fee are due by **May 21, 1999**.