

Litzsinger Road Ecology Center

Community Newsletter

9711 Litzsinger Road • Ladue, MO 63124 • Phone (314)540-4068 • www.litzsinger.org

Looking for Stories

By Bob Coulter

As the school year winds down, we're looking for good stories—like yours—about how engaging kids with their community is making a difference. For the past few years we have been emphasizing place-based education as the frame for our educational programs. As we partner with you to engage your students in studying their local community, we hope that they will be motivated to take action. Using what they have learned, even young students can take action to make their schoolyard or neighborhood a more healthy and vibrant ecosystem.

We'll be looking for these stories as we discuss plans for next year with you, but we also want to offer two other options for you to share your good work. First, we are re-focusing the blog space on the Litzsinger Road Ecology Center (www.litzsinger.org) site to be a community blog. You can use it to post news about what your class is doing, and then point parents our way so they can see the good work their kids are doing.

Another option to consider is to take your story to a larger scale. The *Promise of Place* web site (www.promiseofplace.org) is emerging as a hub of project ideas, case studies, and research about the effectiveness of place-based education. Jennifer Krause (our web guru) and I have assumed a leadership role in the crafting the editorial content for the site, so we're looking for slightly more mature projects that can serve as examples to inspire others. If you have projects you want to share in either of these venues, let your staff contact know when you meet to discuss next year's projects. We'll work with you to get you set up for our blog or to craft the message for *Promise of Place*. ☞

LREC teachers and volunteers—

You are invited to submit photos, documents, links, and other items of community interest to the LREC Community Blog. Please submit requests for author login rights to eddie@litzsinger.org.

Inside this issue:

What Winter Left Behind.....2
Common Springtime Birds at LREC (and Their Look Alikes).....4
Glimpses of Spring.....5

Upcoming LREC Events:

Volunteer Enrichments:

April 3, 12–2pm: Visit to the McGrath School outdoor "Living Classroom." April 17, 12–2pm: Creek Critters: An Introduction to the Invertebrates of Deer Creek. Call Martha at (314)540-4068 to RSVP.

Stream Sampling for Macroinvertebrates

April 9, 11am. Meet at Glass House. No experience necessary. Please call Danelle at (314)961-4410 with questions or to RSVP.

Summer Professional Development for Teachers

Register now! Go to www.litzsinger.org/profdev.html.

Upcoming Opportunities:

Global Climate Change Meets Ecophobia: A Talk by David Sobel

April 18, 7:15pm. At Webster University. RSVP to (314)968-6959 by April 10.

Eco Expo

April 18 & 19. At the Saint Louis Science Center. Free. Topics include recycling, building and construction, water, food, energy, home, and transportation plus kids' activities. See ecoexpostlouis.com.

Chinese Culture Days

April 24 & 25. At the Garden. Festival of arts, food, and performance. More info at www.mobot.org.

What Winter Left Behind

By Danelle Haake

As spring is ushered in with warm afternoons and abundant blooms, we can fondly recall what winter brought this year: picturesque icicles dangling from the roof, the sounds of children laughing as they play outside on a snow day, and the gentle fall of evening snowflakes while a hushed world awaits the glistening white carpet at dawn. The silence is interrupted only by the rumble of the salt truck and the grinding of the scrapers—sounds that make me cringe all winter long.

Road salt is an emerging threat to our urban waterways, including Deer Creek which flows through LREC. The salt that helps keep our roadways clear of snow and ice, flows with stormwater into streams and rivers across the country. When dissolved, the chloride ions from the salt can interfere with the reproduction of fish and invertebrates, can shock the organisms due to the speed of the changes in chloride concentration, or can be directly lethal. While most of the chloride has left the stream within a couple of days, residual chloride remains in the stream sediments for months, slowly

being released throughout the spring as insects emerge from their aquatic larval forms, mate, and lay their eggs back in the water.

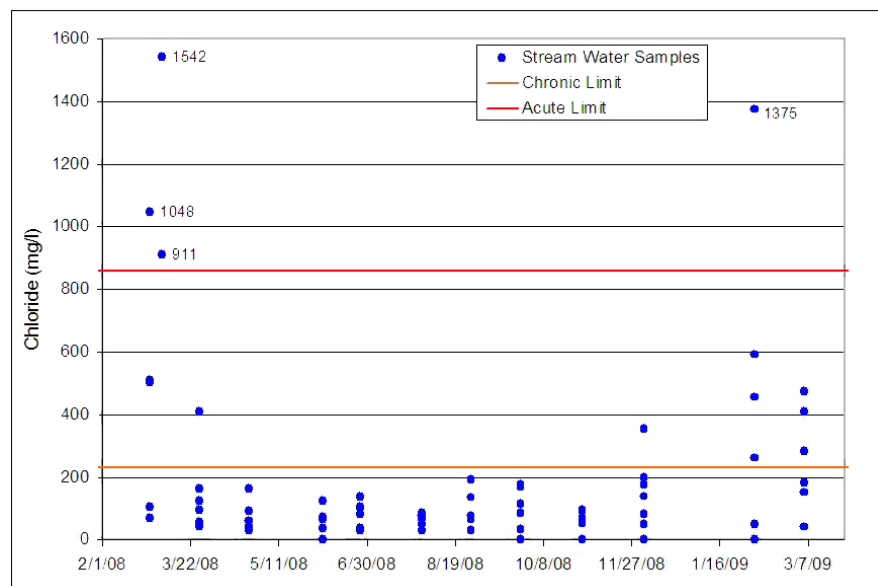
Missouri Water Quality Standards state that chloride concentrations above 230 mg/l on a chronic (continual) basis are dangerous to aquatic life while concentrations above 860 mg/l are acutely (immediately) toxic (Missouri Code of State Regulations: 10 CSR 20-7.031 p.18). Our own LREC Stream Team volunteers have been monitoring chloride concentrations (and much more) at seven stream sites on or near the LREC property for over a

year. We have seen chloride concentrations greater than the acute toxicity limit of 860 mg/l at several sites on several occasions (see graph below). Studies have shown that concentrations in urban areas reach 4,000 mg/l and higher (Schueler, et al, 2005)¹.

Chloride will be a difficult pollutant to manage. At present, it seems that we must choose between having safe roadways in the winter and having living creatures in our streams, but there are things we can do.

If you use ice on your own property, consider whether or

See **Road Salt**, page 3



Above: Chloride concentrations at LREC stream sites February 1, 2008 to March 7, 2009.

¹ Schueler, Tom; Chris Swann; Tiffany Wright; Stephanie Sprinkle. 2005. *Urban Subwatershed Restoration Manual No. 8: Pollution Source Control Practices*. Center for Watershed Protection. (http://www.cwp.org/Resource_Library/Center_Docs/USRM/ELC_USRM8v2sls.pdf)

Road Salt, from page 2

not you need to put down salt under given conditions. If you must use the salt, make sure that you do not apply more than needed.

But what about the salt that is applied on our streets and highways? The amount of road salt used on roadways and on the parking lots of area businesses far outweighs the amounts used by homeowners. Researchers are seeking alternative products that can melt the snow without harming aquatic wildlife; they are having some success with a product derived from beets. Most municipalities are aware of the problem and are in the process of seeking ways to improve their operations. They have several opportunities for improving by more closely controlling the rates of application and the range of the spray.

Municipalities have several incentives for reducing their salt use. First, in this time of tightening budgets, over-application of road salt is an expense that many places cannot afford to ignore. Second, the stormwater permit which covers most of St. Louis County requires that area municipalities make changes to their operations that will improve the quality of the stormwater runoff (see "<http://mkasmt1.stlmsd.com/MSD/PgmsProjs/PhaseII/>" for details on the stormwater permit).

So, as we put away the snow shovels and pull out our hand trowels, remember that, though winter is a memory, its impacts are reaching into the coming seasons. ☪

To learn more about road salt and chloride in streams see:

MSD On-Line Fact Sheet (<http://mkasmt1.stlmsd.com/MSD/PgmsProjs/PhaseII/Road%20Salt%20Flyer%20copy%20pdf.pdf>)

Schueler, Tom. "Snow, Road Salt, and the Chesapeake Bay." from Center for Watershed Protection. (http://www.cwp.org/Resource_Library/Special_Resource_Management/ColdClimate/snow_roadsalt_chesbay.pdf)

Shock, Everett; Kelly Carbery; Neve Noblit; et al. "Water and Solute Sources in an Urban Stream, River des Peres, St. Louis, Missouri." In *At the Confluence: Rivers, Floods, and Water Quality in the St. Louis Region*. Ed. Robert Criss and David Wilson. St. Louis: Missouri Botanical Garden Press, 2003. 150–160.

Deer Creek Clean-Up Friday, April 24, 2009

LREC is teaming up with the Friends of Deer Creek on a one-day stream clean-up effort. While the rest of Ladue will be out cleaning Deer Creek, Two-Mile Creek, and other local streams on Saturday, we will hold our event a day early. On **Friday, April 24, 2009 at 11:30am**, we are hoping you can join us in pulling litter out of Deer Creek and the riparian forest. There is plenty for everyone!

We will provide a lunch beforehand, as well as gloves, bags, and a Stream Team T-shirt. If you have boots or waders, please bring them; we have limited numbers available for your use if needed.

Contact Danelle Haake with questions or to **RSVP**:
danelle.haake@mobot.org;
(314)961-4410.



Common Springtime Birds at LREC (and Their Look Alikes)

By Eddie Jones

On the afternoon of March 18, 2009, Nancy Solodar, Volunteer Educator and world birder, led a birding identification session for volunteers and staff at LREC. Below is Nancy's list of birds that are likely to be seen at LREC in the spring. Participants observed most of these species. We even had a special appearance by a [yellow-bellied sapsucker](#). Links to relevant web pages have been added to the electronic version of this newsletter. We will schedule a late June enrichment session that introduces us to some of the common summer birds seen at LREC.

Woodpeckers & tree feeders:

[red-bellied woodpecker](#)
[downy](#) and [hairy](#) woodpeckers
[pileated woodpecker](#)
[white-breasted nuthatch](#)

Birds that are blue:

[blue jay](#)
[tufted titmouse](#)
[kingfisher](#) (along the creek)

Birds that are blackish:

[starling](#)
[common grackle](#)
[red-winged blackbird](#)
[brown-headed cowbird](#)
[junco](#)

Small chatty darting birds, social in flocks:

[Carolina chickadee](#)
[house finch](#)
[American goldfinch](#)
[Eurasian tree sparrow \(ETS\)](#)

Hawks etc. (Overhead):

[red-shouldered hawk](#)
[turkey vulture](#)

Other common birds:

[Carolina wren](#)
[mockingbird](#)
[flicker](#)
[mourning dove](#)
[indigo bunting](#) and [Eastern bluebird](#) (in the prairie)



LREC Volunteers and Staff spotted and identified many birds during the March 18th Volunteer Enrichment session.
Photo by Eddie Jones.

Spring

By Martha Schermann

Senses come alive again

Pollinators arrive

Return of mild temperatures

Imaginations go wild

Native plants abound

Growth



Photos clockwise from top: Virginia bluebells (Mertansia virginica) emerge; wild turkey (Meleagris gallopavo); middle school students from St. Justin Martyr School plant shrubs by the creek under direction of Malinda and Nancy; Spicebush blossoms (Lindera benzoin). All photos taken at LREC March 2009. Student photo by Eddie Jones, all others by Deanna Lawlor.