

# Litzsinger Road Ecology Center

## COMMUNITY NEWSLETTER

www.litzsinger.org

September 2012

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*Students explore fallen trees. Are fallen trees more than a nuisance? See page 3.  
Photo by Eddie Jones.*

## Creating Innovators

*by Bob Coulter*

One of my favorite reads this summer was *Creating Innovators* by Tony Wagner. Following up on his earlier *Global Achievement Gap* (also worth a look), he shares the stories of about a dozen young social and scientific innovators. My biggest take-home message was this: While these are all people young enough to have gone to school in our current “high standards” era, not a single one credited their newly enriched school curriculum as a factor in their success. Instead, they each found their way from play to passion to purpose as the way to build a unique and successful identity. Along the way, they found mentors—in school and out—who

nurtured motivation, fostered creative thinking, and helped them build relevant expertise.

Can you be that mentor? The projects you have been planning over the summer have the potential to make a real difference in kids' lives. Through you, they have opportunities to take leadership roles in projects that build up the quality of life in St. Louis. Whether they are designing a native plant habitat, building a bird garden, or improving water quality in local creeks, you're giving kids a chance to try new identities and build skills that can last them a lifetime. It's our pleasure and privilege to share this journey with you. ✨



# Summer Workshops

by Leslie Memula

Summer workshops were a huge success this year despite the brutal heat and humidity! The teachers listed at right participated in our workshops this summer, and they will be partnering with the Litzsinger Road Ecology Center during the 2012–2013 school year to further place-based education and outdoor learning in the St. Louis area.

Almost all of these teachers are new to working with LREC! As always, we appreciate that so many educators are dedicated to getting their students outside and investigating the natural world around them. We look forward to working together! 🌿

## Effective Outdoor Learning participants

**Brentwood Early Childhood Center:** Rachel Beard-Curran

**Grand Center Arts Academy:** Carol York

**Hudson Elementary:** Denise Foley, Tim Ranek, Marcia Williams

**Keysor Elementary:** Jen Bartin, Allison Brown, Keri Ems, Jason Krena, Paige McCracken, Cathy Renkins, Leslie Smart

**Mann Elementary:** Colby Heckendorn, Tierrus Tucker, Dawn Slechta

**McGrath Elementary:** Anne Mitchell

**Raintree Learning Community:** Meghan Halsey

**Stix Early Childhood Center:** Carrie Kovac, Lauren O'Donnell, Erin Petrie

**University Child Development Center:** Denise Speck, Trish Wallace

**Uthoff Valley Elementary:** Judy Sowers

## Sustainable Schoolyards participants

**The Freedom School:** Kim Balek, Adina Basse

**The Soulard School:** Travis DeRousse, Courtney Keefe, Sheri Mancuso, Laura Pupillo, Brandy Ray

**Stix Early Childhood Center:** Dan Frey, Alveta Nelson

## What's It Like Where You Live? participants

**Buder Elementary:** Stacey Carman, Cindy Montana

**Hoech Middle School:** Jamie Eagle

**Kratz Elementary:** Dawn Day, Ashley Harmon

**Marion Elementary:** Megan McNulty

**Marvin Elementary:** Jared Martin, Tonya Ryan

**Wyland Elementary:** Yvonne Leigh, Stacy Wilson

## Volunteer Educator Training

Volunteer Educator Training begins Monday, September 10 and continues for eight consecutive Mondays, meeting from 9 a.m. to 3 p.m. Spread the word!

Interested individuals should contact Eddie at 314-409-4947 or [eddie@lrec.net](mailto:eddie@lrec.net) for more information.



A Volunteer Educator leads Wyvetter Younge Middle School students on an exploration of habitats at LREC. Photo by Tami Yonke.

# If a Tree Falls in the Forest...

by Eddie Jones

“Dead wood: useless or burdensome persons or things.”

—Dictionary.com

“To keep every cog and wheel is the first precaution of intelligent tinkering.”

—Aldo Leopold in *A Sand County Almanac*

On Saturday, April 29, the wind and hail came. Cars, homes, and plants were damaged all over the St. Louis area. At Litzsinger Road Ecology Center, a number of large trees were uprooted, lost large branches, or were simply snapped in two, significantly changing some areas of the woodland. The following Monday, closed to programs, was spent clearing paths of fallen trees and branches and selectively cutting some damaged trees to minimize safety hazards. Most of the fallen trees, however, were left where they lay. It's such a mess! Why don't we clean that up?

Here are two reasons:

1. Fallen trees benefit the soil. They slowly release nutrients, like nitrogen, needed by other plants. They also provide a degree of stability, reducing the rate of soil erosion.
2. Fallen trees create microhabitats for organisms that are dependent upon dead wood for food or shelter, including fungi, lichens, insects and other invertebrates, mosses, small mammals, reptiles, and birds.

I don't know if this would qualify as number 3 or should be included in number 2: Children utilize fallen trees, too. You will have to decide whether this qualifies as human habitat-enhancement. However, these kids appear to be a legitimate component of the LREC ecosystem.

Fallen trees: Useless and burdensome? Or cog and wheel? 🌿



Photo by Eddie Jones.

## In Memoriam

We are deeply saddened to have lost two of our wonderful volunteers this summer.

### Rose Marie (Skip) Smith

died peacefully in her sleep on Friday morning, August 17, 2012 while vacationing at the family's summer home in Maine. Skip was 83 years young and had just marked her tenth year with us as an Education Volunteer. She leaves behind her husband, three children, and one grandchild. Skip will be missed by all as she was a good friend, mentor, and always a lady of refinement. She leaves many memories and good friends behind here at Litzsinger. She was well-loved, and was liked by all who met her.

### Maureen Ross Helfers

passed away on August 26 at the age of 60 surrounded by her loved ones. She leaves behind her husband, four children, and two grandchildren. A St. Louis Master Gardener, this past summer she won a restoration award from the Ladue Garden Club, along with a conservation award from the National Garden Club of America. She was an integral member of the Tuesday morning Horticulture Volunteers, and her devotion to Litzsinger and advocacy for our mission was carried far beyond our site. We will miss her laugh, smile, strength, and friendship.



# Mary & Deanna's Fabulous Adventure

by Mary Voges and Deanna English

This August we had the opportunity to attend the North American Prairie Conference (NAPC) in Winnipeg, Manitoba. It was a wonderful opportunity to experience the furthest reaches of North American prairie (and, honestly, to escape the St. Louis heat!). Mostly it was an opportunity to meet many wonderful people who devote their lives to restoring, preserving and educating people about the uniqueness and value of our prairies.

The attendance was low for this conference, around 225 people, but this made the experience much more intimate. By the end of the conference it felt like we were leaving old friends. The conference was extremely well organized and the speakers were amazing.

We each had our favorite speakers. Deanna's favorites were Wes Jackson from the Land Institute and Sharon Butala. Mary really enjoyed David Daniels.

Wes Jackson made a virtual appearance—his flight was delayed—and used his usual charisma to update us on the wonderful research being done at the Land Institute. Somehow listening to Wes Jackson speak always makes us hopeful for the future of responsible grain production.

He reminded us about the yearly prairie festival occurring each September in Salina, Kansas (September 28–30 this year). Wendall Berry will be there, along with many more inspiring folks. Deanna was fortunate enough to

attend the festival a few years ago and is now itching to go again. We are considering a road trip. Is anyone interested in joining us?

Sharon Butala is a wonderful storyteller and writer who kept us spellbound telling us about living on over 13,000 acres of grassland in Saskatchewan. Recently the ranch was turned over to the Nature Conservancy of Canada (NCC), which guarantees its conservation for as long as the NCC is around.

David Daniels, an Ojibway elder, spoke about Canada's native plants and their traditional and medicinal uses. We think everyone in the room was humbled at some

See **Adventure**, page 5



The tallgrass prairie near Winnipeg. Photo by Deanna English.



From **Adventure**, page 4

level by the depth of indigenous knowledge that is being lost. Fortunately Mr. Daniels, and others like him, are working hard to preserve that knowledge by translating their native names for these plants to the scientific name. He was inspiring.

After mornings of keynote speakers, in the afternoons we attended presentations. The subject areas spanned from rangeland and grazing ecology to multimedia prairie. Speakers included students, professionals, and volunteers, and all of them were interesting. It was difficult to decide where to spend our time. Some of our favorite presentations included:

***The Significance of Micro Prairie Reconstruction in Urban Environments and Employing Visual Art as a Component of a Home Prairie Reconstruction in the City***  
**by Bruno Borsari**

Bruno Borsari spoke twice about urban applications and education—very similar to what we promote here at Litzsinger. It was inspiring to hear what others are doing in their cities to promote native plants in yards along with education and community outreach.

***Coastal Tallgrass Prairie Management at Armand Bayou Nature***

***Center Pasadena, Texas***  
**by Diane Humes**

Diane Humes spoke about a very inspiring project at Armand Bayou Nature Center in Texas. This 2500-acre preserve has a huge volunteer base that makes things happen. We both know how important volunteers are when running a non-profit, and it was impressive to hear about how these volunteers have taken on such a large space and are making such a difference.

***Integration of Native Prairie Filter Strips into Row-Crop Agriculture***  
**by Pauline Drobney**

Paulene Drobney is from the STRIPs project (Science-based Trials of Rowcrops Integrated with Prairies) at Neal Smith National Wildlife Refuge, near Prairie City, Iowa. She talked about the amazing research being done regarding integrating strips of prairie within row-cropped agriculture. It was amazing and inspiring to hear about the increase in biodiversity and the reduction in soil erosion and runoff from fertilizer.

The third day of the conference was set aside for field excursions to different prairie areas. We chose the tallgrass prairie tour. While their tallgrass prairie was short compared to ours further south, the land was beautiful and we saw

many familiar friends like big blue stem, goldenrod, New England aster, and bee balm. Deanna's personal favorite was *Helianthus nuttallii* or chocolate coneflower, which smelled just like chocolate! Once Deanna discovered that, her pace was much slower as she stopped every few feet to take a whiff of this amazing plant.

The icing on the cake was an evening banquet at the Manitoba Museum in downtown Winnipeg. This wasn't your ordinary sit down dinner either. Rather, we were able to wander the museum while waiters floated around with trays of wonderful food. Imagine having a museum to yourself and a bunch of new friends to wander with while eating treats like shrimp, salmon, beef wellington, sushi, and stir fry. You hear music from a live band as you wander into a room with a replica of a 1600s sailing ship. You later encounter a replica of a town from the time of the Hudson Bay heyday. You end the evening with dessert in a small theater watching silent movies. What a delight!

Despite the small turn out for the conference it was an incredible experience. We are both so grateful to work at a place that allows us these enriching opportunities. ✨

# Glass House Quiz: Drought

by Danelle Haake and Deanna English

*Note: This quiz was written prior to the Labor Day weekend. Rainfall totals and drought condition map do not take into account recent soaking rains from Hurricane Issac.*

This summer, the weather has been a pressing concern for those of us in the Glass House. After a warmer-than-normal

winter and a wonderful, long spring, the state of Missouri and much of the region experienced quite a heat wave, with nearly two-months-worth of days reaching 95 degrees F or higher. According to NOAA (National Oceanic and Atmospheric Administration), we have set 24 record-high temperatures in St. Louis so far this year, with at least one of these

days occurring each month. We have also had 19 record-high low temperatures (i.e., the coolest temperature of the day is higher than any other coolest temperature recorded for that day in past years).

But in addition to these soaring temperatures, we have also been short of rain. After a wetter-than-normal first half of spring, some-

one turned off the tap. So far this year, we've had nearly 21 inches of rain, which is almost 6 inches less than our normal rainfall amount for this time of year. Since the beginning of June, we have had about 4 inches of rain, well under the 10 inches we would normally expect at this point in the summer.

According to NOAA, we are still in a state of drought, despite the recent rains that brought with them cooler temperatures.

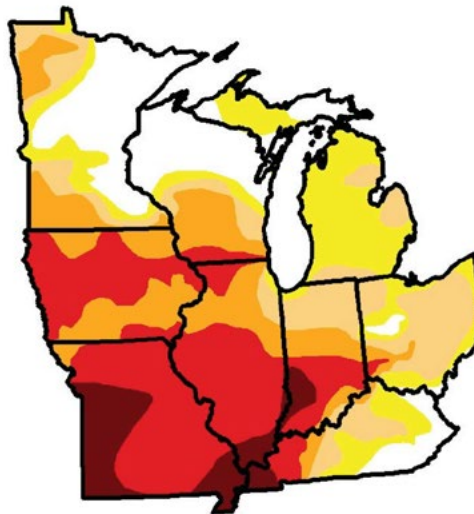
## U.S. Drought Monitor Midwest

August 28, 2012  
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	17.67	82.33	65.38	49.96	33.19	7.09
Last Week (08/21/2012 map)	19.32	80.68	66.32	51.06	35.04	7.17
3 Months Ago (05/29/2012 map)	57.68	42.32	11.34	1.42	0.00	0.00
Start of Calendar Year (12/27/2011 map)	71.84	28.16	13.42	6.80	0.00	0.00
Start of Water Year (09/27/2011 map)	58.85	41.15	14.01	5.03	0.00	0.00
One Year Ago (08/23/2011 map)	56.37	43.63	10.65	0.60	0.00	0.00

**Intensity:**

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>



Released Thursday, August 30, 2012  
Brian Fuchs, National Drought Mitigation Center

From The Drought Monitor website by the National Drought Mitigation Center: <http://droughtmonitor.unl.edu>.

See Quiz, page 7



From **Quiz**, page 6

So, since we are hearing so much about drought and the weather, we thought we'd look into it further. We hope you enjoy what we've learned!

**1. The St. Louis area has a relatively plentiful supply of fresh water flowing by in both the Missouri and Mississippi Rivers. Should we be concerned about reducing our water consumption?**

- a) No way! There's no need to conserve! It's not like we could ever use all that water!
- b) No—we shouldn't worry about conserving unless the drought significantly lowers the river levels. There is plenty of water in the rivers for now...
- c) Yes—just because we live close to a water resource does not mean we should use it. We should conserve in solidarity with our less-fortunate, drought-stricken friends outside of St. Louis.
- d) Yes! A lot of energy is required to clean water—whether we are in a drought or not. We should always conserve.

**2. We have been doing some watering here at LREC this summer. Which areas have we been watering? (There may be more than one answer.)**

- a) the prairies
- b) recently planted trees
- c) established trees
- d) lawn areas
- e) the rain garden
- f) potted plants we will provide to schools

**3. You may have heard about a “flash drought.” What is it?**

- a) a new punk rock band that became popular at an opportune moment
- b) the opposite of a “flash mob”—everyone gathers in a public place and suddenly leaves, making other members of the public wonder if they missed an evacuation warning
- c) a rapid drying of soil and plants caused by persistent heat, wind, and low humidity
- d) a drought that lasts no more than four months

**4. There was another record broken in July (this one a 60-year record) that can be directly related to the drought conditions across the U.S. Which record was it?**

- a) area hit by dust storms
- b) number of tornadoes
- c) hail damage
- d) number of earthquakes

**5. As of the end of July, how much precipitation would be required to end drought conditions in St. Louis in one month?**

- a) 3–6 inches
- b) 6–9 inches
- c) 9–12 inches
- d) 12–15 inches

See **Quiz**, page 8



From **Quiz**, page 7

Answers:

**1. d) Yes! A lot of energy is required to clean water...**

While it is generally best to not be wasteful with any resource, the most pressing reason to conserve water is to reduce energy consumption.

Much of the drinking water in the St. Louis area is provided by pumping water from the gravel beds below the Mississippi, Missouri, and Meramec Rivers. The water is replenished quickly from the river above. Large particles are filtered by the gravel, and the water is then treated to remove excess nutrients and chemicals that can cause foul tastes or odors. It is also disinfected to kill microorganisms. The water is then piped across the area to our homes, schools, and workplaces.

Energy is used to pump the water as well as to create and transport the chemicals required for treatment and disinfection—on average, about 4% of the energy we generate in the U.S. is used to treat and transport drinking water (NRDC, 2009). In the year 2000, about 200 kWh of energy per person were used to treat water (US DOE, 2006)—that is about a quarter of the energy used monthly per household in the Midwest (EIA).

**2. b, c, and f) recently planted trees, established trees, and potted plants...**

It should come as no surprise that we have been watering trees that were recently planted. It is important that they be allowed to develop a healthy root system before they are tested by such severe weather as we have had recently. It should also not surprise you that we would water potted plants when there is no rain for weeks at a time; anyone who has tended a container garden knows that those pots dry out quickly!

But you may be surprised to learn that we have been watering established trees. Trees absorb most of their water from the upper 6–12 inches of soil, so when we do not get rain for weeks at a time, the soil and roots dry out and stress the trees. While this is also stressful to a lawn, dead lawns can be regrown next season to look as good as new; a 60-year-old tree is much more difficult to replace!

**3. c) a rapid drying of soil and plants...**

I expect we've all heard of flash floods: a heavy downpour combined with runoff from lots of paved surfaces causes streams to rise rapidly to overflow their banks. Generally flash floods

last only a couple of hours. A *flash drought* is pretty much the opposite of that, but with a twist; a lack of rain and humidity combined with high winds and temperatures causes rapid evaporation of water from both soil and plants. The twist is that, while a flash flood goes away quickly, the flash drought seems to be sticking around.

**4. b) number of tornadoes.** No storms means no tornadoes. NOAA's (National Oceanic and Atmospheric Administration) preliminary data shows that the number of tornadoes reported in the U.S. during the month of July is far less than any reliable data shows in the last 60 years. In fact it looks like the whole summer of 2012 might break the record for fewest tornadoes. In prime tornado season—mid-April to late July—the U.S. typically sees about 850 tornadoes. This year, we are showing a little less than 300. The actual tornado touchdowns in July of this year number 12. Normally the tornado touchdowns for July number around 150.

**5. d) 12–15 inches.** According to NOAA, it would take 12–15 inches of rain over a period of one month to end our current drought conditions.

See **Quiz**, page 10



# How Is the Habitat?

by Danelle Haake

The weather this summer has been challenging for plants and animals alike. You've all seen how wilted and burnt our urban and suburban landscape looks: brown leaves, cracked soil, crunchy grass. While we have had some species or portions of LREC that are showing signs of stress, overall we are faring pretty well. But rather than telling you how well our native landscapes are doing, I thought it would be better to show you how great the habitats on-site look at the end of August! 🌿



1: Woodland.  
2: Prairie.  
3: Prairie diversity.  
4: Senna and wild rye (spiderwort in background).  
5: Woodland diversity.  
Photos by Danelle Haake.

From **Quiz**, page 8

*Sources:*

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## LREC Announcements

September 26

### Monthly Water Quality Sampling

9am to noon, meet at the Glass House. Questions? Email Danelle Haake at [danelle@litzsinger.org](mailto:danelle@litzsinger.org) or call her at 314-961-4410.

## Local Events

September 7

### Fall Wildflower Market

4 to 8pm at Shaw Nature Reserve. Admission is \$5. Learn more at <http://www.shawnature.org/>.

September 7 & 8 (Forest Park)

September 21 (Tower Grove Park)

### BioBlitz 2012

Join scientists and naturalists to explore natural areas in the parks. Free, but pre-registration required. Go to <http://academyofsciencestl.org/> or call 314-533-8291.

September 15

### Prairie Day

10am to 4pm at Shaw Nature Reserve. Explore the through hikes, activities, and demos. Members: \$3. Non-members: \$6 adults/\$2 children ages 15 and under. More at <http://www.shawnature.org/>.

September 29

### Green Homes & Great Health Festival

9am to 4pm at Missouri Botanical Garden. Explore ways to maintain a healthy planet and a healthy you! Included in admission. Learn more at <http://greenhomesstl.org>.

September 29

### Public Lands Day at the Confluence

8:30am to 2pm at the Confluence. Volunteers are needed for tree planting, trash clean-up, trail work, and invasive species removal. Call 314-402-5233 or visit <http://www.greenwaynetwork.org/events.php>.