

ecology action center news



Spring 2013

Turn it off for Earth Hour

March 23 - 8:30- pm 9:30 pm

Liz Kuehn
EAC Intern

On Saturday, March 23, people from across the globe are banding together to turn off nonessential lights and equipment in an effort to raise awareness about how energy efficiency and conservation can help reduce the negative impacts of climate change. While climate change is a global issue, it requires us to think locally and come together with our surrounding community to take action.

Taking action locally is becoming increasingly important as McLean County and surrounding areas experience the impact that climate change is having on the planet. Since records began, the summer of 2012 was one of the hottest and driest in Illinois and across the U.S..¹ In fact, during July of 2012, about 95% of the state of Illinois was experiencing a drought of severe conditions or worse.² Lack of precipitation took its toll, and local farmers' crops withered and browned, with dying crops making up the majority of many farmers' fields. As a

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Fracking: What You Don't Know Can Harm You

Brittany Brady
EAC Intern

Most of us warm our homes, showers, and food with the help of natural gas. And we think that's a good thing, having replaced polluting coal and oil fuels with this "cleaner" method. Yet, most of us never think about where this gas comes from. A new way of extracting hard-to-reach bubbles of natural gas deep down in our bedrock (called fracking) is heating up controversy around the country, including Illinois. Among other environmental concerns, fracking is accused of being a water hog, a water polluter, and a threat to human health.

What is Fracking?

Fracking (short for high-volume hydraulic fracturing) is the process of drilling to retrieve trapped natural gas bubbles or oil in shale rock up to 8,000 feet below the Earth's surface. By injecting a mixture of water, sand, and chemicals into the ground at high pressures, the shale rock formations fracture, releasing the

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Mark Your Calendars

March 23 Earth Hour

April 2 Green Drinks

April 8 Electric Vehicle Night

April 13 Illinois Sustainability and Wellness Expo

April TBA Rain Barrel Workshops

April 20 Clean Up Day

May 5 Fell Arboretum Native Plant Sale

May 18 Wild Ones Native Plant Sale



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gas and allowing it to rise to the surface for capture.

Of the millions of gallons of water and chemicals pumped underground, much will stay in the fracking well, but, over time, some wastewater will rise back to the surface. Safe containment of this chemical-laden fluid underground and the disposal of wastewater are error-prone. Water pollution from these errors has created widespread environmental and health problems along with long-term risks to water resources.

Fracking is Water Intensive

Many of you might not know that fracking requires massive amounts of fresh water. Over the lifetime of a single fracking well, up to 8 million gallons of water are used, and in just one 5 acre site, anywhere around 16 wells can be drilled (adding up to around 200 Olympic sized swimming pools). That's a lot. This issue is magnified by the fact that once water is used for fracking, it cannot be returned to the hydrological cycle—it is too contaminated to properly filter. In contrast, 90-95% of residential water used indoors can be treated at a sewage treatment plant and return to the water supply again.

Fracking May Pollute Water and Harm Health

Concern over fracking practices continues with the toxic chemicals used. Because the technology is so new, studies are just beginning to document associated health and environmental effects; however, preliminary findings are concerning. For example, according to a 2011 study published by the *International Journal of Human and Ecological Risk Assessment*, over 25% of the chemicals used in natural gas operations could cause cancer, 37% could disrupt the endocrine system, and 40-50% could affect the nervous, immune and cardiovascular systems. Additionally, a 2012 study found that people living within half a mile of fracking operations face significantly higher risks to cancer and other health problems than those living further away. Companies are not even required to publically disclose the

chemicals they use, making it difficult for researchers to further measure the effects on health.

How can fracking chemicals reach water sources? Up to 75% of the water injected underground for fracking stays deep within the earth, potentially contaminating surrounding groundwater sources with methane and other pollutants. In the unfortunate story of Pavillion, Wyoming, residents were told by the U.S. EPA to avoid their drinking water after studies in 2010 found multiple water wells contaminated with fracking chemicals methane, 2-butoxyethanol, benzene, acetone, traces of diesel fuel, and other toxic substances. Benzene alone is a known carcinogen that appeared at levels 50 times higher than what is considered safe; it is linked to both leukemia and breast cancer. Sadly, the story of Pavillion is not unique. Over 1000 cases of water source contamination near U.S. fracking sites have been documented.

Surface water sources can also be contaminated by fracking wastewater that returns to the surface. Wastewater carries pollutants from within the Earth including heavy metals and radioactive material, such as arsenic or radon. Leaks, blowouts, spills at well sites or in traffic accidents, and improper or even illegal dumping of wastewater can all lead to water contamination: in 2008, Colorado saw a leak of 1.6 million gallons of fracking wastewater, eventually ending up in the Colorado River; in 2011, Pennsylvania saw 21,000 gallons of fracking wastewater spill from a valve left open that contained barium, hydrochloric acid, and other harmful fracking chemicals. The list of accidents goes on.

What Can You Do?

Over the past decade, rising energy needs, the demand for cleaner burning fuels, and technological advances in hydraulic fracturing have all driven the rush for fracking natural gas in shale rock: a rush that has consumed 31 states nationwide. While the benefits and risks of fracking are being debated,



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result, local farmers suffered, which plays a critical role in our local economy.

As we consider the impact climate change is having on the planet, we must also consider the role that humans play in climate change, as 65% of pollution that causes climate change comes from energy generation and use.³ With the impacts of climate change being seen locally it is essential for the Bloomington-Normal community to come together to take action during this Earth Hour event and beyond. Below are just a few ways we can all help to promote energy conservation and efficiency. More tips can be found on the Ecology Action Center website.

- Turn off lights when you leave the room
- Use the minimum amount of lighting that is necessary
- Turn off the TV, VCR, stereo, fan, computer, printer, and other electronics when not in use
- Reduce the HVAC system during times when no

one is home

- Set the thermostat to 68 degrees F in the winter and 78 degrees F in the summer
- Conduct energy audits of your home to determine how much energy you are using

Families, individuals, local businesses, and other community groups are encouraged to participate in our local Earth Hour event. To sign-up to participate in Earth Hour go to www.ecologyactioncenter.org. For additional information about Earth Hour visit www.earthhour.org. We can all work together to spread the word and help raise awareness about climate change.

¹ Wiltgen, Nick. "Drought Rises in Historical Rankings." *Weather.com*. 26 Sept. 2012.

² Manchir, Michelle. "Worsening Illinois drought points to increasingly ominous signs for crops." *Chicago Tribune*. 27 July 2012.

³ "Energy: Surprising facts and what they mean." *Environmental Defense Fund*. 2012.

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educate yourself. What you don't know may harm you.

- **Learn About the status of fracking in Illinois.** A fracking regulatory bill, HB 2615, which would allow fracking to occur in Illinois as well as a bill to ban fracking, SB 1418, were both introduced to IL officials this past month. To track the progress of these bills, you can visit the Illinois General Assembly's website at www.ilga.gov/legislation.
- **Attend a workshop.** Dr. Bill Rau, Professor Emeritus, Industrial Sociology, Illinois State University will speak about environmental and health concerns with fracking at the upcoming Illinois Sustainable Living and Wellness Expo on April 13. www.islwe.org
- **Read more about the health effects.** Dr. Sandra Steingraber, ecologist, Illinois Wesleyan alumna and cancer survivor, has focused much of her recent work on health concerns of fracking. Learn more at www.steingraber.com.

Will the Easter Bunny bring a Radon Test Kit to your home? You could – and make this the sweetest gift for you and your family. Radon is a cancer-causing, radioactive gas. You can't see it, smell it, or taste it, but radon is estimated to cause well over 25,000 deaths each year (more deaths than from melanoma or drunk driving.)



Radon test kits are available at the EAC for \$10.00 each. These 5 to 7 day tests are simple, reliable, easy to use and you will get test results in 10 days after mailing in. Contact Ruth Ann Lipic, Radon Program Coordinator at 309-454-3169 with your questions and concerns.



Illinois Sustainable Living and Wellness Expo 2013

The ISLWE empowers you to:

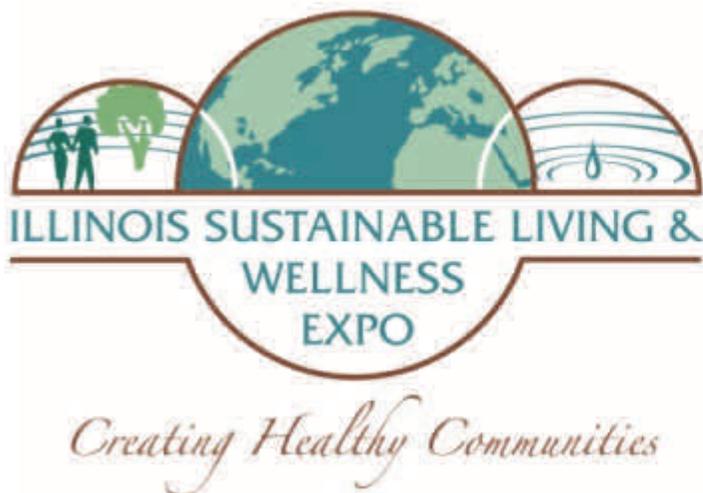
Zero your Waste • Learn about risks of **Hydraulic Fracturing** • Ponder **Permaculture** • Sample **Natural Products** • Improve your home's **Energy Efficiency** • Dance to the tunes of **local musicians** • Investigate **Green Burial** options • Explore **Natural Healing Therapies** • Check out **Electric Cars** • Tune up or donate your **Bicycle** • **Recycle** your batteries/plastic garden pots/CFLs/clothes and textiles/electronics • Be inspired by the **Renewable Fashion Challenge** • Shop at the **Mobile Mission Mart** • Consume **local foods** • Immerse in the **Stories** of our planet • **Invest** in companies that share your values

Join the Ecology Action Center and Illinois Wesleyan University Wellness for the ISLWE on Saturday, April 13, 9 a.m. to 4 p.m., at Illinois Wesleyan University Shirk Center. This annual event provides you with abundant resources for living well and living green and is free and open to the public. Experience stimulating workshops, numerous exhibitors, fun and healthy hands-on activities, great music, stimulating story-telling, and so much more!

MEGA Recycling returns to the ISLWE - bring your nontraditional residential recyclables such as home electronics, household batteries, plastic garden pots, clothing and textiles, TerraCycle items, and CFLs. Midwest Fiber will also provide free personal document shredding (and recycling) for residents. NOTE - no business wastes accepted and no hazardous waste items. Please call the EAC for more details.

Make your whole ISLWE experience sustainable--carpool or bike to the event and take advantage of free valet bicycle parking provided by Friends of the Constitution Trail. Help us make the event Zero Waste by bringing your own reusable tote bag, water bottle, and coffee mug. Single use disposable items are *not* provided at the event. However, coffee is available for free at the ISLWE Café for anyone bringing their own coffee mug. Please bring your own reusable water bottle as bottled water will *not* be available for sale; tap water is readily available from multiple drinking fountains on-site. This year the event will also feature its own smartphone app, to allow more visitors to avoid a paper program guide. Look for more information on the iPhone and Android app closer to the event.

Learn more about the ISLWE, including a schedule of workshops, musicians, and other activities and information at the expo website at www.islwe.org. See you there!



April 13, 2013

Illinois Wesleyan University
Shirk Center

Volunteers are still needed to help make the ISLWE run smoothly, especially the MEGA Recycling collection - sign up to volunteer your time at the ISLWE at www.islwe.org.



Be Yard Smart - Plant Native

Usage of native plants in landscaping is growing by leaps and bounds! Of course there are a multitude of benefits including increasing habitat and food supplies for native species up the food chain, reduction or elimination of the need for watering and fertilizers, beautiful diversity, and choices for every soil, sun, and moisture condition. Learn more about using Illinois native species in landscaping and other strategies for sustainable landscaping through EAC's Yard Smart program. Free Yard Smart Fact Sheets are available for download at www.yardsmart.org.



You can buy great quality native flowers and grasses for your landscaping at one of the multiple native plant sales going on this spring in our community.

May 4, 8 a.m. - Fell Arboretum Native Plant Sale. In the cul-de-sac at School Street and Beaufort in Normal

May 18, 8 a.m. - Wild Ones Native Plant Sale. U of I Extension Auditorium, 402 N Hershey, Bloomington

Help Wanted - April 20 Creek/Trail Clean Up

What: Constitution Trail/Sugar Creek Clean Up Day *in honor of Norm Miller*

Where: Meet at Tipton Park, south parking lot

Who: Ecology Action Center, McLean County Wheelers, Mackinaw Canoe Club, and Friends of Constitution Trail

Join us as we help clean up litter and debris from Sugar Creek and Constitution Trail (East to West along G.E. Rd. and Vernon Ave.) from Tipton Park (Bloomington) down to Audubon Gardens (Normal). Any and all volunteers will be welcome to show up that day. We can use, of course, all the help we can get! The more participants we have, the shorter we can make the day!

Wear old clothes, bring gloves and something to drink. Trash bags and lunch will be provided. Please help and join in our clean up effort, in conjunction with Earth Day Bloomington-Normal Community Clean Up Days. RSVP to Michael Brown at (309) 454-3169 or by email at mbrown@ecologyactioncenter.org.

New resource from the EAC - mCLEANwater.org



Clean, safe drinking water is something we too often take for granted. The EAC is one of many local partners working to protect our local water supplies - for both current and future generations.

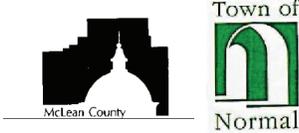
In order to better make information available on local clean water issues, the EAC created mCLEANwater.org as a watershed clearinghouse for our community. mCLEANwater.org features a variety of educational materials for local residents, educators, and decision makers on watershed restoration issues. A highlight of the site is the Watershed Library - a unique and unprecedented collection of all local watershed studies, reports, presentations, maps, management plans, and other related documents. Submissions of additional documents to the library are welcomed and may be made through the website.

In addition, the site includes a showcase of successful watershed projects and a directory of watershed partners. The site will continue to grow and evolve over time as more content and library resources are included and mCLEANwater.org becomes an increasingly valuable repository of information. Check out mCLEANwater.org, share resources you might have for inclusion, and help us spread the word!



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