



*Making a Difference for the Environment
Locally and Globally Since 1970*

October 2016

Serving Kent, Portage County and Beyond

Welcome to the October 2016 issue of the Kent Environmental Council newsletter
The focus for KEC in 2016 is sustainable cities.



Reducing Greenhouse Gas Emissions: Part 2

This second article in our series focuses on what the U.S. Environmental Protection Agency recommends we do at the office to cut carbon emissions. Look at your workplace, and see if you can incorporate any of these ideas or encourage others to do so. All of the following is taken directly from the [EPA website](#).

What You Can Do: At the Office

Business and home offices use a significant amount of electricity for heating and cooling, lighting, and operating equipment. Here are a number of easy ways to protect the environment, fight climate change, and help make the air cleaner.



1. Manage your office equipment energy use better

Did you know that the total electricity consumed by idle electronics equals the annual output of 12 power plants? Save energy and reduce greenhouse gas emissions at work by setting your computer, monitor and other office equipment to power down when not in use. Activate the [power management features](#) on your computer and monitor, unplug laptop power cords when not in use and turn off equipment and lights at the end of the day. Plugging everything into a power strip makes it easy to shut everything down at one time.

2. Look for ENERGY STAR-qualified products for the office

Office products that have earned the [ENERGY STAR](#) feature special energy-efficient designs, which enable them to use less energy while performing regular tasks. Look for [ENERGY STAR](#)-qualified office equipment, such as computers, copiers, and printers, in addition to more than 60 product categories, including lighting, heating and cooling equipment, and commercial appliances.

3. Ask your office building manager if your building has earned the ENERGY STAR

Buildings can earn EPA's ENERGY STAR too! ENERGY STAR-labeled buildings provide safe, healthy, and productive environments that use about 35% less energy than average buildings. Their efficient use of energy also reduces the total operational cost of the building. Let your facility's maintenance department know about the ENERGY STAR buildings program, so they can learn how to improve your building's performance.

4. Use less energy for your commute

Switching to public transportation, carpooling, biking, or telecommuting, can save energy and reduce greenhouse gas emissions on your way to and from work. Encourage your employer to offer commuter benefits that address limited or expensive parking, reduce traffic congestion, improve employee recruiting and retention and minimize the environmental impacts associated with drive-alone commuting. If you do drive, find out the fuel efficiency of your vehicle at the Federal Fuel Economy website, and make more environmentally informed choices when purchasing your next vehicle by using EPA's Green Vehicle Guide.

5. Reduce, reuse, recycle

Reducing, reusing, and recycling at the office helps conserve energy, and reduces pollution and greenhouse gas emissions. Reduce, reuse, and recycle at the office by using two-sided printing and copying; only printing what you need; buying supplies made with recycled content; and recycling paper products, batteries, and used printer cartridges. All of these actions help conserve energy and reduce carbon pollution. For old electronics (e.g., computers, monitors, cell phones, TVs), investigate leasing programs, manufacturer and retailer take-back programs, and municipal programs and events to ensure reuse and recycling. You can also donate used equipment to schools or other organizations and take advantage of any available tax incentives for computer donations.

6. Use green power

Emissions from electricity generated from fossil fuels can be one of the most significant environmental impacts associated with your organization's operations. Green power is electricity that is generated from renewable energy sources such as wind, sun, geothermal, and biomass. Purchasing green power is an easy, effective way for your organization to reduce its carbon footprint and environmental impact. Visit EPA's Green Power Partnership for information on how to purchase green power.

7. Encourage your organization to develop a greenhouse gas inventory

Developing a greenhouse gas inventory is a critical first step toward measuring and managing your organization's climate change impact. An inventory is a list of emission sources and the associated emissions quantified using standardized methods. Many organizations are taking this step and by doing so find that most of their emissions come from building heating and cooling, fleet vehicles, electricity use, and employee travel. EPA's Center for Corporate Climate Leadership is a resource center to help all organizations identify and achieve cost-effective GHG emission reductions.

Tune in next month for what you can do with your auto.

--Lorraine McCarty

→ Pedestrian Safety: Stay Alert!

Defensive walking is as important as defensive driving. So remember to stay alert while walking. Don't just zone out, especially as you walk between buildings or parking lots during the day. You can't assume that cars will always obey the traffic lights and signs. Pay attention at all times to avoid accidents. Here are some additional tips:



- Cross the street at a crosswalk.
- Push the crosswalk button if one is available, and wait until it shows it is safe to walk.
- Double check to see if cars are stopped, and make eye contact with the drivers to be sure they see you before you cross.
- Stay alert by not texting while crossing the street.

As a driver, make sure to slow down and keep your eyes open for pedestrians and other drivers. We all need to take responsibility for our safety and the safety of others.

--Iris Meltzer

→ Lake Erie's Three Water-Quality Issues . . . and the Status of Current Attempts to Correct Them

Like Caesar's Gaul, Lake Erie is divided into three parts. The majority of the water enters through the Detroit River into the Western Basin, which is the shallowest with an average depth of 24 feet. Water flows from west to east into the Central Basin (average depth is 60 feet) and then into the Eastern Basin with an average depth of 80 feet and a maximum depth of 210 feet. Because of its overall shallowness, Lake Erie is the most productive of the five Great Lakes, producing more fish than the other four Great Lakes combined. In general, the shallower the lake, the warmer it will be. Accordingly, the Western Basin is the warmest, while the Eastern Basin is the coolest of the three basins.



The depth and temperature of each of the basins bring separate problems. The plague of the **Western Basin** is the size and toxicity of the hazardous cyanobacterial bloom (HAB). Following a 15-year hiatus, cyanobacterial blooms (often called algae) have returned since 1995 to foul the water for wildlife and human recreation and to diminish the quality of the water for drinking. The major problem with these cyanobacterial blooms, often of the species *Microcystis*, is the toxicity that can be associated with the

bloom. The toxic factor is an alkaloid called microcystin which, in the short-term, can lead to a sore throat and in the long-term can cause liver cancer and disrupt neurological processes in humans and aquatic wildlife (e.g., birds and fish).

The issue of concern in the **Central Basin** is the recurrence of zones of hypoxia, or dead zones, at the bottom of the lake. These regions in the deepest part of the lake (i.e., the hypolimnion) have diminished concentrations of oxygen that are insufficient to support deep cold-water fish (e.g., walleye) and diminished populations of aquatic insect larvae that are important links in the food chain. Central Basin hypoxia also was prevalent in the 1960s and 1970s but was a thing of the past until 1995. Since then, zones of hypoxia have covered virtually the entire bottom of the Central Basin, extirpating essential invertebrates from the food chain there and driving deep-water fish to warmer waters in the upper strata of the lake, which are suboptimal for sustained viability.

In the **Eastern Basin**, the main concern is the nuisance growth of *Cladophora*, also called maiden hair because it appears to be long, green tresses growing from the rocks to which it is attached. This large, green alga holds fast to rocks along the shore and in shallow waters, making them slippery and undesirable for waders and swimmers. The main problem with *Cladophora* is that the long strands break loose in a storm and wash up on the beach. Once on the beach, they decay to a smelly mess, called beach muck, where they support the growth of bacteria that can be pathogenic to fish and aquatic birds (e.g., avian botulism). As with other issues, excessive growth of *Cladophora* was prevalent in the 1960s and 1970s, subsided in the 1980s and has returned since 1995 as a major problem along rocky shores, predominantly along the northern shores of Lake Erie. Unlike the annual recurrence of HABs and hypoxia, which are unique to Lake Erie, the nuisance overgrowth of *Cladophora* is seen in each of the five Great Lakes.

What causes this damage to ecosystem health of Lake Erie, why is it recurring now, and what can be done to restore it to the health it enjoyed in the 1980s and early 1990s?

Because each of these problems has recurred more or less simultaneously, the view is that they are connected somehow, despite little supporting evidence. The prevailing answer is based on 40 years of research by a large number of scientists that has consistently shown that the availability of phosphorus controls the growth and size of these HABs. Constrain the amount of external phosphorus-loading, and the HABs will diminish. Both laboratory and field experiments have supported this view many times, and mathematical models based on phosphorus-limitation of HABs have been written that fairly well predict what is seen in the field. Based on these consistent findings, the binational Great Lakes Water Quality Agreement of 1978 as amended in 1987 mandates that no more than 11,000 metric tons enter Lake Erie annually (called the annual external phosphorus-load). Since 1987, the average annual external phosphorus-load has been about 8,000 metric tons. Controlling the P-load to the lake has controlled these blooms from 1980 to 1995.

The external phosphorus-load continues to be below the mandated level, yet HABs have recurred since 1995 and, when they occur, they often are not phosphorus-limited--so something is different. What

limited the HABs from forming in the 1980s and early 1990s apparently no longer is sufficient. The size of the HAB in the Western Basin varies widely from year to year. The size of the bloom, measured by the total amount of chlorophyll, is correlated with the external phosphorus-load. When the external phosphorus-load is large, carried by snowmelt runoff or by the size and frequency of rainstorms from March through June, the HAB that develops in mid-July through August will be large. Whereas in a dry year, such as this year, the external phosphorus-load is small, the resulting bloom is small. This means that something is the same: external phosphorus-loading appears to continue to control the size of the summer HAB.

Regarding the toxicity of the HAB, the chlorophyll content of the bloom does not correlate well with the microcystin toxicity of the bloom. This means that you could see a dense pea-soup green bloom in the water but be uncertain of its toxicity; conversely, a moderate bloom could be highly toxic or not. First, it is well known that not all cells of a HAB carry the genes for making microcystin. Also, current research in the lab and in the field indicates that the toxicity of the bloom is a function of the amount of nitrate in the water. This indicates that the genes for making microcystin may be turned on by the presence of nitrate in the water.

As for the causes of hypoxia in the Central Basin, the presumption for some time has been that the growth of the HABs in the Western Basin travel to the Central Basin where they sink to the bottom and are decomposed by bacteria that consume the oxygen. The problem here is that the water does not move that fast from the Western Basin to the Central Basin, and the correlation between the size of the HAB in the Western Basin and the extent of the hypoxia in the Central Basin is tenuous at best. Recently, a much stronger correlation has been shown between the extent of the hypoxia and the size of the late-winter diatom bloom, which occurs from the end of February through mid-April. This correlation indicates that the extent of the hypoxia may be caused by the decay of the diatom bloom, which is limited in its growth by silicate rather than by phosphorus. Regarding the growth of *Cladophora*, the relationship between total external phosphorus-loading and growth of this nuisance alga is weak. The growth of this alga appears to be influenced by local inputs of phosphorus rather than the concentrations of phosphorus in the open waters.

Despite these caveats:

- Something is different now. It is not the same as 1970 to 1995.
- HABs frequently are not phosphorus-limited.
- Nitrogen is involved at least in terms of toxin production.
- Hypoxia may be caused by the diatom bloom, which is silicate-limited.
- It is unclear how total lake phosphorus-load would affect local crops of *Cladophora*.

Attempts are being made to relate these three persistent issues in Lake Erie to total external phosphorus-loading based on findings from 1970 to 1990. Mathematical models are being constructed and tweaked to model current conditions. In short, these models indicate that external phosphorus-loading needs to be reduced by 40%. That is the current recommendation, but it is only a recommendation to those who can make it happen. To make it happen, rules (whether voluntary, incentivized or mandatory compliance) that revise best management practices need to go through the legislative process--and that means that it must be seen as

economically feasible and socially acceptable if it is to be politically possible. Passage of such legislation will require a well-informed electorate willing to express its views in public and before legislators.

--Bob Heath



The Healing Power of Nature

Here are some facts you might not have known about the healing power of nature.

Nature can lower blood pressure. According to a large 2016 study, a simple way to improve heart health is by spending 30 minutes or more each week in a park. It showed that 10% of people with high blood pressure could get it under control. The fresh air and stress reduction helped, but the fact that nature is undemanding and admiring it requires "effortless attention" is helpful. Also, the natural fragrance of trees, which have phytoncides, have been shown to lower blood pressure by quelling the fight or flight response, which can stress the body.



Exposure to nature can increase awe. A 2015 study showed that people who looked up at towering trees were more likely to help a stranger, as opposed to people who looked up at equally towering buildings. Awe attunes people to things larger than their selves and causes individuals to feel less selfish and to behave in more generous and helping ways.



Nature promotes cancer-fighting cells. According to an April 2016 study, women living in areas with a lot of vegetation had a 12% lower risk of death from all causes compared with people living in less green places. Other research has shown that people who walk through a forest inhale phytoncides that increase their number of natural killer (NK) cells--a type of white blood cell that supports the immune system and is associated with combating infections and autoimmune disorders and decreases inflammation, which is involved in heart disease and diabetes.

Another study showed that women who took two long walks in the forest on consecutive days increased their NK cells by 50% and the activity of these cells by 56%.

Nature may help with ADHD symptoms. Small studies with children who have ADHD had the children take three 20-minute walks in one of the following: a park, a neighborhood or an urban area. Afterward, those who walked in parks concentrated substantially better than those who walked in the other settings. People without ADHD also can improve their concentration, retention, and short-term memory by interacting with nature.



Nature can help with depression and anxiety. A small 2015 study found that people who walked for 90 minutes in a forest or park were less likely to ruminate (which is often seen in depression) and were less anxious.

Even fake nature has benefits. Studies have shown that even putting a plant in your room, looking at nature through a window, or listening to the sounds of nature on a recording can provide a range of benefits.

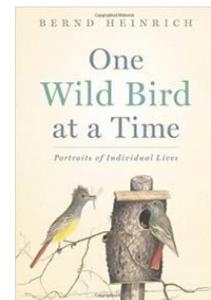
Source: Sifferlin, Alexandra. "The View." *Time*. July 25, 2016.

--Lorraine McCarty

 Read This!

***One Bird at a Time: Portraits of Individual Lives* by Bernd Heinrich** (recommended by KEC member Karl Liske)

This book is a result of Heinrich's experiments and his passion for close day-to-day observations of 16 bird species in Vermont and Maine. He climbed trees and chased birds over the countryside to learn about birds in what has been called "hands-and-knees science." Heinrich asks interesting questions, such as what are Black Capped Chickadees eating in the treetops in winter, and how many ants does it take to raise a baby Fleaflicker? An interesting read for all you bird lovers out there.



Strong Towns Website (recommended by KEC member Ann Ward)

The [Strong Towns website](#) has information on many interesting and successful projects. Its mission is to support a model of development that allows America's cities, towns and neighborhoods to become financially strong and resilient. A million people who care are the centerpiece of their strategy, along with making changes in small increments. The founder of this nonprofit organization, Charles "Chuck" Marohn, is an engineer and city planner from Brainerd, Minnesota. Click [here](#) to see his TED talk on "Expanding Opportunity: The Important Difference between a Road and a Street."



➔ How to Choose LED Lightbulbs

Incandescent lightbulbs have given way to CFL lightbulbs and are now being replaced by LED (light emitting diode) lightbulbs in the stores. This is because CFLs can last two to five years, while LED lightbulbs can last 20 years or more and give good light quality. Here are some hints about how to choose LED lightbulbs:



1. Forget the watts--think lumens (brightness):

- 1,600 lumens is equivalent to 100 watts
- 1,100 lumens is equivalent to 75 watts
- 800 lumens is equivalent to 60 watts
- 450 lumens is equivalent to 40 watts

2. Learn about light appearance:

- This refers to the color temperature, measured in Kelvin (K).
- Warm lights are best for table lamps or living-room fixtures and run about 2,700 to 3,000K. This light is similar to older incandescent lightbulbs.
- Cooler bluish light is best for task lighting such as in a workshop or laundry room. This light looks more like natural daylight and is about 5,000K.

3. Choose dimmers and lightbulbs that are compatible:

- Be sure the LED lightbulb you choose is dimmable.
- Some older dimmers won't work with LED lightbulbs. If that's the case, then a new dimmer switch can be installed.

4. Enclosed fixtures need special lightbulbs:

- Read the packing to be sure the lightbulb you choose is made for enclosed fixtures.
- Lightbulbs used in enclosed fixtures have a more efficient thermal design and can withstand higher temperatures in the enclosed space. Heat damages the electronics in the lightbulb, and it will fail prematurely.

5. Options for recessed lights:

- One retrofitting option for recessed "can" fixtures is to just swap your existing lightbulb with LED lightbulbs.
- Another option is to replace such fixtures with LED retrofit trim kits, which have the lightbulbs built in. Some kits make older recessed cans airtight, preventing conditioned house air from escaping into the attic. (If you can see open slots inside the can, it's not airtight.)
- If you don't have recessed lights but want them, installing disk lights is an option. The LED lightbulbs are built in and can be recessed into an existing junction box so that the fixture sits nearly flush with the ceiling.

6. Where they won't work:

- Never put an LED lightbulb inside an oven. Use an incandescent appliance bulb. The heat from an oven will kill the LED lightbulb quickly. LED appliance lightbulbs that are so labeled are hard to find and are meant for refrigerators and freezers.
- LED lightbulbs can interfere with remote controls on garage door openers. So check with the garage door opener manufacturer about compatible LED lightbulbs or use vibration-resistant or rough-service incandescent lightbulbs.

Source: *The Family Handyman*, September 2016.

--Lorraine McCarty



Film Review: *This Changes Everything*

The film version of *This Changes Everything* (director Avi Lewis and author Naomi Klein) was shown at the Unitarian Universalist Church on August 12 and proved to be very interesting and had a somewhat more positive outlook than the book by the same name--laying out the case for what we can do but also focusing on how we have been kidding ourselves for 400 years as we extracted oil and gas, thinking we could turn Mother Nature into the mother lode without consequences to the environment. These stories we tell ourselves are something we can and must change.



To make the film, the director and author went to nine countries (including Canada, Greece, the United States, India, Brazil, and China) in four years. They saw the devastation of man-made climate-change-induced weather patterns such as Hurricane Sandy. They witnessed protests by ordinary citizens against corporations, sometimes leading to deaths. They talked to workers who profited from their jobs and after a few years left the environmental damage behind to return to their homes. They talked to people who live near drilling sites and who want to stay in their own homes but are concerned about what inheritance they are leaving for their children. And they talked to people who are developing skills and creating jobs to bring renewable power to their communities without devastating the environmental consequences of oil and gas.

This was a very thought-provoking movie, and I hope that anyone who has not seen it will do so--and give real thought to how we can help to change our future. For a short article titled "The Radical Leap" by Naomi Klein, click [here](#).

--Lorraine McCarty



Tips for Going Green

Try these tips for going green:

- **Early to Sprinkle, Early to Green:** If you water your lawn, 30% of the water you apply can evaporate if you water in the heat of day. Try watering early in the morning or in the evening.
- **A Pair of Savers:** As temperatures creep up, keep in mind that pairing a ceiling fan with your air conditioner saves much more energy than just turning up the air conditioner. Over a month, this pair is estimated to save you up to \$30 dollars on your utility bill.
- **Cool of Body, Cool of Mind:** To fight the temptation to crank up the air conditioner in the summer, try wearing clothes with natural fibers that "breathe," and avoiding carbohydrate-heavy, warm foods. These changes will help you reduce that terrible sticky feeling and keep your body from additional warming in the summer heat.

Source: Oberlin's Office of Environmental Sustainability e-newsletter, May 2016.



Building a Clean Energy Nation, State by State

"Undaunted by partisan gridlock on Capitol Hill, the Union of Concerned Scientists is working in states across the country to boost renewable energy and climate preparedness," reports the summer 2016 issue of Catalyst. These local victories are part of a strategy the UCS is using to build momentum toward national action on climate change. Examples include the following:



- **Phasing out coal in Oregon.** The UCS has done so by sending experts to testify at local legislatures in Oregon and Washington, conducting state-specific renewable energy analyses, and working with local community groups. The UCS helped build a case for a law on a new clean energy plan this spring that makes it the first state in the country actually planning to phase out coal completely. By 2040, 50% of the state's energy must be from renewable sources.
- **Blazing the trail in California and Massachusetts.** These two states have been longtime leaders in clean energy, and the UCS has worked with officials to develop policies to serve as national models. In California, the UCS achieved a precedent-setting renewable energy standard of 50% by 2030 and helped policy makers understand that the electric grid could operate reliably with this much wind and solar energy.
- **Pushing ahead in the rest of the "Power 19."** While the Clean Power Plan is held up by the Supreme Court, it has not yet ruled on the merits of the case; therefore, states that want to do so can comply with the plan to cut one-third of all carbon dioxide emissions from power plants by 2030. Twenty-nine states have publically pledged to work toward or go beyond compliance, and the UCS is working with them by touring, meeting with and briefing various officials, utilities and regulators--showing them how compliance is achievable and affordable. In fact, their analysis shows that 31 states are already over halfway toward meeting the plan targets, and 21 states are on track to exceed them.
- **Helping coastal states prepare for rising seas.** Sea rise is affecting U.S. coastal communities, and many leaders in at-risk communities know something must be done but don't know what to do. The UCS is traveling along the East and Gulf coasts, speaking with business leaders, community groups, local officials and even the U.S. armed forces

about mitigation to protect their residents. The UCS also has supported local planners in their design of climate-adaptation measures for their towns and cities on the front lines. One study in Norfolk, Virginia, helped officials there secure a \$120 million grant from the Department of Housing and Urban Development to protect the region from recurrent flooding.

Source: Union of Concerned Scientists . *Catalyst*, Summer 2016.

Editor's Note: Local governments in Ohio need to follow this example and look for ways to reduce carbon emissions despite the state's policies that have put implementation of renewable energy goals on hold.

--Karl Liske and Lorraine McCarty



Save the Date

November 8 (Tuesday)

Vote at your local polling place. A federal appeals court judge has ruled that voters who were wrongfully removed from the voting roles will be allowed to vote on a provisional ballot and must be counted if their names meet the supplemental process criteria in the ruling.



December 31 (Saturday)

This is the deadline for submitting proposals for environmental grants to be awarded by the Kent Environmental Council. For a full list of criteria and the RFP and cover sheet, go to kentenvironment.org or send questions to kentenvironment@gmail.com

June 2, 2017 (Friday)

Third Annual Edith Chase Symposium

Theme: Restoration through Vegetation (education on restoring riverside ecosystems to clean surface water flowing into streams and lakes)

Presenter: TBA

Location: College of Architecture and Environmental Design, Kent State University

June 2, 2017 (Friday)

Poetry Reading

Theme: The river

Location: Wick Poetry Center, Kent State University

June 3, 2017 (Saturday)

Workshop on Riverside Plants

Theme: Workshop geared toward the individual homeowner and farms and business owners of land with stream frontage offering guidance on planting the river-edge environment to benefit both the land and the water of the watershed

Presenter: Ken Christiansen, Davey Resources and primary designer of the Plum Creek restoration project

Location: Plum Creek Park

Time: 1 p.m. (tentative)



The Environment in the News

Train Safety Progress Falling Short

***Akron Beacon Journal* - August 18, 2016**

While some railroads have made substantial progress, others have not equipped a single locomotive or track with positive train control (PTC), which is mandated by Congress to prevent deadly collisions and derailments. PTC uses digital radio communications, GPS, and signals alongside tracks to monitor train positions and can automatically stop or slow trains if needed. The mandates were passed in 2008, and railroads were given seven years to implement them. Last year, however, the deadline was extended to December 2018. PTC technology is in use on 9% of freight route miles and 22% of passenger train miles, according to the Federal Railroad Administration. Installation of PTC varies considerably by railroad. The BNSF railroad has equipped 4,309 of its 5,000 locomotives, while Union Pacific has equipped only 13 of its 5,656 locomotives. The railroad administration worries that delays risk adding more accidents to an already long list.

Summit Lands Funds for Removal of Lead

***Akron Beacon Journal* - October 6, 2016**

Summit County has received a \$2.9 million grant from the U.S. Department of Housing and Urban Development to clean up 160 lead-contaminated homes. Requests have been very high because of the publicity from the Flint, Michigan, ongoing health crisis. The Summit County Public Health and the Department of Community and Economic Development have removed lead from 140 homes with a previous grant.

Water Protections Long Overdue

***Akron Beacon Journal* - June 4, 2016 and *Record-Courier* - June 5, 2016**

The Ohio General Assembly acted speedily to unanimously adopt legislation for clear and necessary standards into state law for tighter testing requirements and prompt community notification of lead or other impurities are found in drinking water. New timelines for public notice when dangerous levels are identified in drinking water allow only two days to notify residents and other users if lead and copper levels rise above the threshold (down from 30 days to provide notice). A more in-depth education campaign would have to be launched within 30 days (down from 60 days.) If local action does not occur within the new timelines, the state would be required to step in to provide notice, and there are potential penalties for noncompliant systems.

One-Call Emergency Response Ordered

***Akron Beacon Journal* - August 10, 2016 and *Record-Courier* - August 10, 2016**

Ohio Gov. John Kasich has streamlined procedures to ensure a faster, more effective response to explosions, leaks and other disasters. One call is required from energy companies within 30 minutes after an accident, and then state agencies (including the Department of Natural Resources, the Division of State Fire Marshal, the Ohio Environmental Protection Agency and the Public Utilities Commission of Ohio) will coordinate a response to support local officials in charge of the scene. The order is effective immediately, and the Ohio Oil and Gas Association is concerned that they have not had enough lead time to scrutinize the order. The rules are tougher than federal requirements. The toll free hotline is 1-844-OHCALL1 (1-844-542-2551).

Study Finds Common Pesticide to Reduce Live Bee Sperm

***Record-Courier* - July 27, 2016**

The new study in the journal *Proceedings of the Royal Society B* found that male drone honey bees who ate pollen treated with a class of insecticide called neonicotinoides produced 30% less live sperm than those who ate untreated pollen. The researchers are not sure how the chemicals are damaging the sperm, but they believe the damage occurs after the sperm are produced. Another study earlier in the year related the death of bee colonies with failures of queens, which was linked to drones' dead sperm.

Commissioners Discuss Dam Options Again

***Record-Courier* - August 25, 2016**

Portage County Commissioners have postponed a decision on Hills Pond Dam but discussed some broad options with landowners living next to the dam, which is 500 feet long and 50 feet high. Options include repairing the dam or taking it out. Three options each cost \$1.6 million, with no grants for either of two different repair options; however, grants are available for dam removal, cutting county costs to about \$650,000. Dam removal would include restoring the former lake bed and a stream bed to carry water from Lake Mogadore and other local springs. The result would be a much smaller pond. Gene Roberts, Water Resources Department director, is concerned that the connection made to Mogadore Reservoir be done in such a way that a water supply for fighting fires is secured.

Zoo Feted for Green Efforts

***Akron Beacon Journal* - August 28, 2016**

Business practices that are sensitive to the environment at the Akron Zoo have resulted in the Green Award Top Honor from the Association of Zoos and Aquariums. The zoo's sustainability efforts include being the first LEED zoo building east of the Rocky Mountains, establishing the first green-certified restaurant at a U.S. zoo, achieving an 80% reduction in water use since 2009, and the diversion of millions of pounds of organic waste from landfills since 2013.

New England's Drought Is Taking Toll on Wildlife

***Akron Beacon Journal* - August 21, 2016**

A hot, dry summer in all six New England states is hurting crops but also affecting wildlife, forcing bears, snakes, ants, and other species to venture farther out for food. The drought also is multiplying mosquitoes who breed in low water at river banks and stressing stream-dwelling fish that do not like low, warm water. Droughts have been moderate, with severe spots in Massachusetts and Maine, and have caused officials to close portions of the Farmington River to fishing for a month for the first time in memory.

Weather Extremes Mar Summer

***Akron Beacon Journal* - September 21, 2016**

The relentless and hellish record-smashing extremes this summer featured floods that killed hundreds of people and caused more than \$50 billion in global losses and droughts that parched cropland and caused wildfires in other areas. Summer weather now extends from May to September, and more than 2,000 people were killed globally by deadly storms and extreme weather. Nighttime temperatures remained high this year, a record for the hottest nighttime temperature on average. The National Oceanic and Atmospheric Administration recorded nearly 15,000 daily records for warmest nighttime temperature in the United States. Nighttime temperatures not dropping below 72 degrees at night does not allow the body to recharge, plants to grow, or air conditioners to be shut off. The extra heat in the air and in the oceans means extra moisture is in the air, causing more extreme rain to occur.

Low Gas Prices Are Stalling the Green-Car Revolution

***Time* - August 8, 2016**

The demand for more fuel-efficient cars, such as electric and hybrids, has dropped. Electric and hybrids now make up less than 3% of new cars purchased. This is down from past years because about 75% of people who traded in a hybrid or electric car in 2016 took home an all-gas car and then drove more than ever. "In June, U.S. drivers consumed more than 9.8 million barrels of gas every day, eclipsing a record set in 2007," Time magazine reported. Because fuel emissions produce 16% of greenhouse-gas emission in the United States, the more that people drive, the warmer the climate gets.

Feds Say They Won't Evict Pipeline Protest Camp

***Record-Courier* - October 2, 2016 and *Akron Beacon Journal* - August 19, 2016**

Federal officials will not evict the Oceti Sakowin, or Seven Council Fires, camp, citing free-speech issues; however, the U.S. Army Corps of Engineers owns the land where the Oceti Sakowin are camped and is encouraging the protesters to move to other land where they have a permit. Many Native Americans believe the Standing Rock Sioux still own the land under an almost 150-year-old treaty. The gathering began growing in August and is the largest gathering of Native American tribes in a century--all there to protest the \$3.8 billion, 1,172 mile Dakota Access pipeline. Tribal officials believe the pipeline threatens sacred sites at the confluence of the Missouri and Cannonball rivers and threatens the water for millions of people. Local ranchers and farmers worry that the growing number of protestors will damage their fields, and there have been reports of stolen hay and animal grazing without permission. The protests have halted pipeline construction, work that pro-pipeline supporters say will create more markets for North Dakota's oil and gas and reduce truck and oil-train traffic.

Ruling Allows Surveyors on Private Property

***Akron Beacon Journal* - September 18, 2016**

A ruling by the Ohio Ninth District Court of Appeals says that Nexus Gas Transmission Co. has the right to enter private property and survey for a controversial 225-mile pipeline that would go from Eastern Ohio to Northern Michigan. Most of the 5% of land that has not been surveyed is located in Medina County. Residents testified that the surveyors wanted to cut down trees and dig holes without cleaning up the land and were accompanied by an off-duty police officer carrying a gun. Landowners have not yet decided about appealing the matter.

Anti-Fracking Effort Derailed

***Akron Beacon Journal* - September 17, 2016**

The Ohio Supreme Court ruled that it will not force a 2016 charter initiative onto the ballot in Meigs County. This 6-1 ruling affects similar initiatives in Portage and Athens counties. The three initiatives were seeking to install a new form of government to enable local officials to regulate fracking and oil and gas practices in their counties to protect the water, air and land. The court sided with Ohio Secretary of State John Husted that the proposed charters did not meet state law requirements for a charter form of government. In a lone dissent, Justice William O'Neill argued that the people's right to create their own form of government was being quashed and that the "secretary of state does not have the power to veto charter petitions of behalf of the oil and gas industry simply because the citizens did not pick exclusively from the two forms of county government delineated in R.C. 302.02.3."

Streetsboro Panel Nixes Mining Plans

***Record-Courier* - August 5, 2016**

The Streetsboro Planning and Zoning Commission denied the request for a conditional zoning permit to start surface mining on Sahbra Farms. The company was disappointed with this decision and is discussing what path to take. Mayor Glenn Broska agreed with the decision and added that he did not think there was "clear and convincing evidence that this [conditional zoning request] complied with all the general and specific conditions that are required by our zoning code." Neighbors who had feared a decrease in property values also were pleased.

Effects of Climate Change on NE Ohio Detailed

***Akron Beacon Journal* - August 14, 2016**

Dr. Jeffrey R. Courney, executive director of the Wilderness Center, talked to master gardeners about how the changes in temperature, precipitation, and soil moisture patterns over the next 100 years will change the deciduous forests, northern coniferous forests, and western grasslands. There will be a radical shift in the composition of the regional ecosystems, according to Courney.

More Evidence Earth Warming

***Akron Beacon Journal* - September 28, 2016**

A new study that looked at the past 2 million years shows that the Earth is warmer than it has been for about 100,000 years and is locked into eventually hitting the hottest mark in more than the 2 million years they studied.

President Obama Hails Climate Change Deal As Potential Turning Point

***Record-Courier* - October 6, 2016**

President Barack Obama welcomed news that the Paris climate change agreement will take effect in a month. While he agreed that this alone will not solve the climate change crisis, he said that it was the best chance to counter some of the worst consequences of climate change.

Consensus Needed on Response to Global Warming

***Record-Courier*, reprinted from *Pittsburg Post-Gazette* - October 9, 2016**

Even if every one of the 190 countries achieves its pledges in the Paris climate change agreement, scientists do not believe the reduction in greenhouse gas emissions will be enough to contain global warming. The U.S. Environmental Protection Agency's Clean Power Plan, intended to lower carbon pollution from power plants (especially coal-fired plants), is now frozen and awaiting the outcome of the U.S. Court of Appeals for the District of Columbia Circuit to see if it can be implemented. The article states that global warming is real and that the world needs to get serious about it. A middle ground and the development of a realistic plan that Republicans and Democrats can agree on are essential for solving the problem. Until then, says the article, the world is approximately "nowhere" on greenhouse gas emissions.

New Park Opens in Portage

***Record-Courier* - August 15, 2016 and *Record-Courier* - August 8, 2016**

Shaw Woods, located at 7075 Berry Road in Ravenna Township is the newest park in Portage County and features horse trails. Virginia Shaw and her late husband, Douglas, donated the land for the park. The park features mature woods, high-quality wetlands, headwater streams, and the west branch of the Mahoning River upstream from West Branch State Park, east of Ravenna. Shaw's vision is to showcase land management practices for conservation. In response, the park district will continue to manage the forest for harvest and will showcase other agro-forest opportunities, such as cultivating fruit trees, shrubs, mushrooms and nuts.

Obama Gives Marine Life Bigger Safe Zone

***Akron Beacon Journal* - August 27, 2016**

President Barack Obama has created a 582,578-square-mile safe zone for tuna, sea turtles, and thousands of other species by proclaiming the expanse of the Papahānaumokuākea Marine National Monument off the coast of Hawaii as quadrupled in size.

Plans for Outer Banks Turbines

Akron Beacon Journal - August 12, 2016

The Interior Department is proposing to sell leases for 122,000 acres 28 miles off Kitty Hawk for the right to build wind energy turbines. After leases have been awarded, specific environmental studies and reviews of specific turbine construction plans will follow. Offshore areas near Wilmington and South Carolina were announced for lease previously. "The first operational wind farm in the U.S. offshore waters may begin generating power off Rhode Island later this year," according to the article.

Drilling Rigs Increase

Akron Beacon Journal - August 10, 2016

The Utica Shale and Point Pleasant Shale areas of Ohio have increased the number of drilling rigs to 16, up from the previous week. Permits for horizontal wells totaled 2,210, while the number of such wells drilled in the state totaled 1,767. These totals are up from the previous week also.

Natural Gas Output Soars in Ohio Shale

Akron Beacon Journal - September 2, 2016

Natural gas production in the second quarter of 2016 was up 50.6% compared to 2015, producing 4,839,792 barrels of oil and 334 billion cubic feet of natural gas in the second quarter 2016. But oil production is down 18.7% compared to the same period last year. The [full state report](#) can be found online.

Two New Mines Planned

Akron Beacon Journal - September 7, 2016

Even as coal companies face bankruptcies and other bad news, mines in West Virginia and Virginia will create 400 jobs as Ramco Development opens two new mines backed by \$90 million in investments. This coal will be used for steel manufacturing (not electric generation). Metallurgical coal prices are up due to various international market factors, but Ramco says it can make the mines work even at fairly low prices.

Job Grants for Coal Country

Akron Beacon Journal - August 28, 2016

Officials for the Appalachian Regional Commission and other agencies announced 29 projects totaling nearly \$39 million to create or retain more than 3,400 jobs in agriculture, health care, manufacturing, technology and other industries. These jobs will be offered in communities hardest hit by coal layoffs in Texas, Ohio, Alabama, Kentucky, Mississippi, Pennsylvania, Tennessee, Virginia, and West Virginia.

--Summarized by Lorraine McCarty



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