

ICEBERG OR THE SHORE: STEERING THE ENERGY CRISIS

by Ken Leinbach, Executive Director

It has been said that when the indigenous Iroquois held their council meetings, one member first spoke this invocation: In our every deliberation we must consider the impact of our decisions on the next seven generations. This, in my mind, defines wisdom -- wisdom that is needed when it comes to fossil fuels.

I've been reading a lot on the subject of late ... balancing the often extreme doomsayer "environmentalist" view with that of the oil funded geologist, the highly respected geophysicists, economists and what I consider to be my best sources of unbiased information: my brilliant brother - a geologist from MIT and a local friend and physicist emeritus from UWM.

In a nut shell, here is my conclusion. When it comes to energy our global society is taking a huge risk. As one oil geologist, L. F. Ivanhoe put it "If the captain on the Titanic had had a few hours to change his course, he wouldn't have run into the iceberg. It's when he doesn't have enough time to prepare that all hell breaks loose." By his assessment we are just passing the two hour mark. The rudder needs to turn and it needs to turn now.

Fossil fuels formed from compressed plant material that was deposited in shallow seas 300 million years ago. This material metamorphosed into oil, coal, or natural gas through a multi-

million year process of pressure and heat. There is a tremendous amount of this ancient black fluid, rock and gas underground. But even a tremendous amount has its limits and once it is used up, no more can be made - NONE.

Geologists estimate that before drilling the world had, by generous estimates, eight trillion gallons of oil underground. However, only half of the original eight trillion gallons is actually recoverable. Oil resides in porous rocks, not in nice convenient underground oceans. Much of that rock is extremely difficult or down right impossible to extract from. This leaves us only four trillion gallons of extractable oil. Since 1859 (when the first oil field was tapped) humans have used one trillion gallons of oil. If our daily oil consumption stays the same as today (realizing that the growing oil demand in China and India is not considered here) we will have used the next trillion in 25 years. This means that by 2030 our usable supply of oil is likely to be reduced by half. The next two trillion gallons are less accessible than the first, and thus much more expensive to extract.

The analysis of natural gas is less clear however a couple of reports I read indicate that if natural gas becomes the primary substitute for current oil demand, predicted supply would provide an estimated 35 years. Coal is much more prevalent

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THE NUMBERS ARE IN... AND ARE THEY GOOD!

by Ginger Duiven, Development Manager

The Urban Ecology Center had 34,497 visits from children and adults during the first year in the new green building. That is more than double the 15,681 people who came during our last year in the trailer and *that* was a record year. We nearly doubled our Neighborhood Environmental Education Project from 12 schools to 22 schools. We doubled the number of kids in our summer camp program from 57 to 120. (Are you noticing a pattern here?) The Center's membership has doubled to over 1,500 contributing member households. It seems the only thing we didn't double in the last year is our budget.

We are glad to report that we were able to double everything we do without doubling the Center's budget. That makes supporting the Urban Ecology Center a great investment. Essentially, the value of every dollar you gave last year was doubled to deliver more services to kids, families, members, neighbors and community. As the end of the year and the season of giving approaches, please remember that making a year-end charitable

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ENERGY EFFICIENT FAMILIES

by Beth Fetterley, Director of Education

With significant increases in energy costs and the depletion of non-renewable resources, families are embracing energy efficiency. Including your children in decisions and actions you take can be rewarding, educational and fun! Here are a few suggestions to begin building your energy efficient home.

Home improvement projects for the entire family. Heating your home is the most expensive component of most energy bills. Heat that is lost through windows and doors greatly increases those costs. Any child who can walk can help you identify windows and doors that could benefit from caulk or weather stripping. Give your children a roll of masking tape (or pre-torn pieces taped to a clipboard or plastic container lid) and a piece of light weight ribbon. Have them hold the ribbon up to the edges of windows and doors. If the ribbon moves, have them leave a piece of masking tape at the spot where air is coming in. Once air leaks are identified, older children can help parents apply caulk or weather stripping.

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URBAN ECOLOGY CENTER

River Reflections is created and distributed through a team effort by the following people: McDill Design, Carijean Buhk, Judy Krause, Ken Leinbach, Pat Mueller, Shirley Spelt and a volunteer mailing crew.

Contributing writers: Diane Burnham, Ginger Duiven, Dan Gray, Beth Fetterley, Woody Hagge, Ken Leinbach, Art Paque, Chad Thomack, Tim Vargo and Susan Winans.

River Reflections is a publication of the **Urban Ecology Center**. The Center programming and facility is made possible through the generous annual contributions of 41 foundations and corporations, over 1500 member families and 110 in-kind organizational donors. **No tax dollars are used to operate the Urban Ecology Center.**

If you would like to make a contribution, please see page 12 for the easy to use form or call Ginger Duiven at (414) 964-8505 x106.

The **Urban Ecology Center** is a neighborhood-based, nonprofit community center located in Milwaukee's historic Riverside Park. Using this living laboratory, the **Urban Ecology Center: Provides** environmental education programs to neighborhood schools, **Promotes** environmental awareness in the community, **Preserves** and enhances the natural resources of Riverside Park, and **Protects** the Milwaukee River.

Urban Ecology Center

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Hours of operation:

Monday - Thursday: 9 a.m. - 7 p.m.
Friday & Saturday: 9 a.m - 5 p.m.
Sunday: 12 noon - 5 p.m.

DROPLETS

◆ The Center is excited to announce the acquisition of 30 new Trek bikes! Many thanks to John Burke, President of Trek Bicycles, for the donation of this incredible new programmatic addition and to Chris Kegel, Owner/President of Wheel and Sprocket, for the labor involved with getting these bikes to us. We now are offering Nature by Bike (6th grade) and Bicycle Botany (8th grade) to our neighborhood schools as well as biking programs for our membership. Our first class was a huge success. Chad Thomack, UEC Environmental Educator stated, "I've never seen kids more excited for a class!" Stay tuned next summer for bicycle trips too!

◆ After years of service from our trusty (or is that crusty?) "fox" the Center has adopted a new logo. The logo and the new newsletter design do a good job of reflecting the progress we have made as we grow into our new facility. We hope the changes to the newsletter layout make it easier to read while being just as engaging and informative. Our thanks to Michael Dillon and the staff at McDill Design for the creation of the logo and newsletter design. Michael generously donated much of his firm's time to help us with this creative work. What a team of talented pro's! Please support them if you ever need any design work.

◆ Thanks to our sponsors and community friends for their support of the 2005 Fall Ice Cream Social! Because of your support, we had 750 participants! A special thanks to the following sponsors, performers and community friends who helped make this event such a huge success: Anjum Belly Dancer Troupe, Bayside Garden Center, Bella's Fat Cat, Children's Outing Association, The Chocolate Factory, Cold Stone Creamery, Friends of Hank Aaron State Trail, Friends of Milwaukee's Rivers, Future Green, Jahmes Tony Finlayson, Keep Greater Milwaukee Beautiful, Kopp's Custard, The Park People, River Revitalization Foundation, Sandy Weisto & Friends, Sentry Foods on Oakland, UWM Nike-Reuse-a-Shoe and Edie Walters.

◆ Van makeover. Thanks to considerable financial support from We Energies and the Wisconsin Energy Corporation Foundation, our newest passenger vans received complete makeovers in August. Not only were the vans converted to run solely on compressed natural gas (CNG), but decals and our new logo were added. This means we now have two dedicated CNG vans and two bifuel vans (able to operate on petroleum or CNG). Many thanks to Jeff Anthony, Bob Reagan, Gary Evans and Paul Westerman from We Energies, as well as Splat!dpi, Signs and Lines by Stretch, and Hall Chevrolet for making the transformation happen.

◆ Governor visits the Center. On Thursday, August 18, Governor Doyle held a press conference at the Urban Ecology Center. His office contacted the Center because they felt it was the most appropriate location in the city to announce Governor Doyle's Conservation Agenda, "Conserve Wisconsin." The first floor was packed with politicians, Center members, UEC Board members, staff, students, journalists and interested citizens. We were thrilled with the attendance and were honored to host such a valuable discussion.

◆ Join the Center email list. From astronomy to biology to spontaneous lunches, members find out first on our email list. Our list is not given to anyone and is used for Center business only. Sign up today! If you are a member, send an email to cbuhk@urbanecologycenter.org and type "subscribe" in the subject line. Also, add uec@urbanecologycenter.org to your address book to prevent our email from being blocked by your spam blocker.

◆ Many thanks. The Center would like to thank the following organizations for their generous contributions: Anonymous Family Foundation, Green Tree Garden Club and Garden Club of America – Founders Fund Award, Helen Bader Foundation, Marshall & Ilsley Foundation, Puelicher Foundation and Wisconsin Arts Board.

THE NUMBERS ARE IN...AND ARE THEY GOOD! *continued from page 1*

gift to the Urban Ecology Center is a great investment and can be beneficial to you many ways.

Your monetary gifts are always appreciated and put to use right away. Your gift may be deductible on your personal income taxes. Use the form on the back of the newsletter or watch your mailbox for our Annual Fund Drive letter.

Workplace giving is another option. The Center is a member of Community Shares of Greater Milwaukee. If your employer does not offer workplace giving, call Judy at 964-8505, x102, to help start a Community Shares campaign.

Gifts of stock may receive a double tax benefit: you can deduct the full fair market value of appreciated stock – if owned for more than one year – and you can save

again by avoiding all capital gains taxes on the “paper profit”. For assistance in transferring stock, please contact Judy Krause at the Center.

A planned gift – whether a bequest in your will, a beneficiary designation on your insurance policy or retirement plan, or the establishment of a charitable trust – will help the Center far into the future. To discuss planned giving options, contact Judy Krause or Ginger Duiven at the Center.

The Center needs your support. During this season of giving we hope you will give generously. With your help we can do even more to give children a chance to experience and love nature. You can count on us to re-double our efforts to unite our environment and community.

ENERGY EFFICIENT FAMILIES*continued from page 1*

Encourage your children to wear warm pajamas to bed, then lower the thermostat at 65, 62 or even 60° while sleeping. Try setting your thermostat to 60° while you are gone during the day and no higher than 68° when you are home and awake. If your thermostat is currently set at 72°, this change could reduce your energy bill by up to 10%.

Develop new habits. Pick up indoor hobbies that do not use energy, such as reading, puzzles, board games or art. Everyone in the family can conserve energy by reducing television and computer use. While it is difficult for many families to completely turn off the computer, you can set time limits and priorities. If it is within your time limit, explore the We Energies websites (http://webapps6.we-energies.com/appliancecalc/appl_calc.cfm) to learn how much energy household appliances use.

When cooking with your family, choose recipes that use a toaster or microwave rather than a conventional oven. If possible, try turning off the gas to your oven's pilot lights and relighting them when it is time to cook.

Shop smart. Finally, parents should take a long-term approach to saving money. If you need to replace an appliance, look for the energy star label. For example, an energy star refrigerator, costing on average \$97 more than a standard fridge, can save you \$23 a year. This means that within 4.2 years you have recouped the difference, and for the remainder of the refrigerator's life you will save money and energy. Also, replace incandescent lights with fluorescent lights. Even though fluorescent lights are more expensive, they last longer. According to the US Department of Energy and US Environmental Protection Agency sponsored “Home Energy Saver” website (www.hes.lbl.gov), within 2.5 years of switching to fluorescent lamps and fixtures, you will recoup the additional costs at a rate of return of 41% (accounts for inflation).

If you are concerned about quickly saving money, contact Focus on Energy or check their website for a consultant who can assess your home and make recommendations that will cut costs throughout the winter. Smart decisions today can make tomorrow better for your entire family.

VOLUNTEER CORNER

*by Susan Winans,
School Program Coordinator*

You did it again! Fifty volunteers contributed over 175 hours of their time to help with our Fall Ice Cream Social. An estimated 750 people were in attendance that day. We appreciate your help in making this event a success.

Save the date! Our annual Volunteer Recognition will be held at the Center on Wednesday, November 16th from 7-8:30pm. Come and enjoy some tasty treats made by our Board and staff as we celebrate volunteer accomplishments from the past year. Please RSVP by November 4, 2005 to Kimberly Fein, 414-963-0166, if you plan on attending.



Volunteers needed! Our annual Candlelight Walk will be held Saturday, December 17th. We need help filling and placing luminaries in the park, guiding scripted walking tours through the illuminated forest, greeting participants and serving beverages, maintaining the fire at the Urban Ecology Center, and cleaning up at the end of the event. Volunteers needed from 5:00pm to 9:30pm. Please call Sarah Rohe, Weekend Coordinator, to volunteer: 414-964-8505 ext 114.

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than gas or oil, but less versatile (effective for power, but not great for transportation) and much of the coal that is left is difficult or impossible to burn without significant air pollution and health issues. Even coal, though, has limits within the Iroquois time frame.

In short it seems clear that very soon ... perhaps even within my life time and most certainly within my children's (only two generations), a significant shift in energy use will have to occur. Even if my syntheses of the researched predictions are off by a factor of ten the voice of the 7th generation is not at the table.

Soooo ... what is the captain to do? There is no single silver bullet to solve this problem. It is hard to compete with fossil fuels which essentially pack millions of years of the sun's energy into a compact form. The good news is that there are many very viable ways to produce power: solar, wind, hydro electric, nuclear, biomass and hydrogen to name a few. The bad news, however, is that none

of these options are without challenges and none of them are being nurtured to provide anywhere near the capacity needed to serve our global demand.

Perhaps, however, the more pertinent question is Who is the captain? Who is going to make the hard decisions? Who is going to communicate with clarity and convince the crew (us citizens) what to do? Well ... for lack of anyone else at the table ... I'll do it.

First: Since we see the iceberg we need first and foremost to buy time! This is empowering in that it gives you and I something concrete that we can and must do. Conserve, conserve, conserve, conserve. Consider this when you buy a car, a home, have another kid, make vacation choices, etc. (please read Beth's article on energy efficient families).

Second: You and I need to convince everyone we know, by our actions and our words, to do the same. Peer pressure and modeling are very effective agents for

change. Don't underestimate the power of your individual action.

Third: We need governments, business, and industry to adopt the Iroquois long term approach. If I were King, I would significantly increase wind and solar production with the goal of increasing capacity to the point that our conservative needs were met and we had enough electricity left over to produce hydrogen (currently an energy intensive process but also an extremely available element). Hydrogen then serves our transportation needs via the tantalizing, but yet to be produced within economic reason, fuel cell engine. I would not ignore the nuclear option in this scenario, but put focus on more research not production.

No, all is not lost, but we need the collective wisdom of all of us to make significant changes **now** in our lifestyles, our work and our legislation. In that there is hope.

IS THE RESEARCH WORTH IT? A STORY FROM FALL BANDING

by Tim Vargo, Research Coordinator

Previously I have written about the importance of the Milwaukee River as a migration corridor for wildlife and about Riverside Park as a stopover site for birds during migration. These arguments are based on anecdotal observations and what we have learned from research worldwide. But the reality is we don't know to what extent these arguments are true. So what do we need? We need data.

Getting data, however, means that many of the critters in the park are captured, prodded, weighed, banded, clipped, tagged and measured, which then leads to the question, is all this data collection worth it?

The costs are real. Even the most careful work may result in an injury to a bird, butterfly, vole or dragonfly. We are interfering in the daily routine of each animal, adding stress and in some cases, permanently altering its anatomy.

But we do need that data to steer management of Riverside Park as well as conservation efforts in Southeastern Wisconsin. For example, this fall we banded a gray-cheeked thrush. It had no visible body fat and had probably just finished the first leg of its journey from Canada, landing here exhausted. The surprise came the following week when we caught the same bird with fat bursting out its abdomen, flanks and breast. Rested and fattened, it was ready to make the next leg of the long, perilous journey to South America.



Why is this important? It says that for this particular bird, Riverside Park provided the necessary food, water and shelter for migration. It's only a tiny piece of the puzzle that provides more questions than answers, but it's a necessary step.

Bringing this discussion to an entirely different level, the educational impact on volunteers and students involved in data collection is invaluable. Feeling a bird's heartbeat, touching a mouse, releasing a butterfly or feeling young garter snakes as they develop inside a pregnant female are experiences that undoubtedly leave a sense of wonder and have a lasting impact on those who experience it. And for them, conservation may take on an entirely new, almost spiritual meaning.

If you would like to become involved in Riverside Park research or would like to discuss the importance of our research, please call me at (414) 964-8505, x116.

ASTRONOMY NOTES by Art Paque and Woody Hagge, community volunteers

Mars and Venus bring the year to a close with spectacular views. Mars will reach its brightest (-2.3) on November 7th, rising about sunset and shining through the night as it crosses the sky. Venus shines at a stunning -4.7 on December 9th, its peak of brilliance.

NOVEMBER

Look for Mars in the west northwest, setting at twilight, Jupiter rising in the east northeast before dawn, and Saturn high in the south at twilight. Evenings will show Venus low in the southwest while Mars rises in the east northeast; both about sunset. Find Mercury very low in southwest before sunset until midmonth.

November 3rd will show Mercury (-0.2) 1.3° north of the Moon just before sunset. Find Venus 1.4° north of the Moon at 1 p.m. on the 5th. This will be difficult with the naked-eye but easy with binoculars. Or you can wait until after sunset to look in the southwest where they'll be 2.5° apart. Mars at opposition (brightest, -2.3) rises in east at sunset on the 7th. Keep your binoculars on your nightstand to see the midnight showings of Uranus 5° above the Moon on the 10th and Mars 3° south of the Moon on the 14th. The Moon will be found 0.3° south of the Pleiades (M45) at 6 a.m. on the 16th. The Leonid meteor shower peaks on the 17th.

Expect 10-20 per hour. Look 45° up in southeast and south in hours before sunrise. Find Saturn 4° south of the Moon at 11 p.m. on the 21st. Jupiter will be 5° north of the Moon at 7 a.m. on the 29th. New Moon is on the 1st and Full Moon (Beaver/Freezing/Snow) on the 15th.

DECEMBER

December's morning planets are Jupiter low in the east northeast and Saturn high in the southwest. Evening skies will glitter with Venus low in the southwest at sunset and Mars 45° up in the east northeast. Saturn rises in the east northeast about 8 p.m.

December 4th will show Venus 2° from Crescent Moon after sunset. Look for Venus at its brightest (-4.7) in the south southwest at sunset on the 9th. Find Mars (-1.3) next to the Moon on the 11th. They are their closest at 11 p.m. The Geminid meteor shower peaks on the 13th. Watch midway up in the east sky at 10 p.m. (lower earlier) for 75 per hour. Saturn will sit 4° below the Moon all night starting at 9 p.m. on the 19th. Winter Solstice, the shortest day of the year, is on the 21st. On the 26th in the early morning skies look for Jupiter close to the Moon in the east northeast. December has two New Moons, on the 1st and the 30th. Full Moon (Long Night/Cold/Popping Trees) is on the 15th.

VENUS

Venus, the second planet from the Sun (67.2 million miles), has been watched since prehistoric times and is named after the goddess of love, most likely due to its brilliance in the evening and morning skies. Sometimes thought of as Earth's sister planet, Venus is 7,521 miles in diameter, 95% of the Earth's size, though it has only 80% of our planet's mass.

Conditions are harsh on Venus with surface temperatures reaching 900° F. The atmosphere is mostly carbon dioxide accompanied by thick cloud layers of sulfuric acid droplets. These conditions, combined with a lack of water vapor, make Venus one of the least hospitable planets in our solar system. The surface is largely rolling plains with limited features.

A day on Venus is 243 Earth days long; longer than its year of only 225 days. It also rotates in the opposite direction of Earth. The Sun appears to rise in the west and set in the east.

BOTTLED WATER: IT'S MORE THAN 128 GALLONS FOR \$1

by Dan Gray, Urban Adventures Coordinator

When last at the grocery store, I glanced at some prices for bottled water. I could buy 20 ounces of cold water from *Dasani* for \$1.29. Alternatively, I could purchase a gallon of "Infant Drinking Water" (there was no explanatory information on the label), for \$0.70. For that price you get some water and a plastic container.

According to our Milwaukee Water Works bill, our household is charged \$1.18 per Ccf (cubic hundred feet) of water. One Ccf is 748 gallons. One dollar provides us with 128 gallons of water and the treatment of that water after we

have used it. That works out to \$0.0078 per gallon, or about ¾ of a cent.

128 gallons of ice cold *Dasani* would run you \$1056.77 (or \$8.26 a gallon). You could acquire 128 gallons of "Infant Drinking Water" for \$89.60. In addition to the water, you would have 819 blue plastic *Dasani* bottles, or 128 empty gallon jugs, to dispose of.

The contents of bottled water are not tightly regulated. In some cases, bottled water is the same as tap water. The Milwaukee Water Works reports annually on the quality of the water they treat and the levels of contaminants found in the

water. Further details can be found on their website www.water.mpw.net.

However, this is not a puff piece for that department. I have studied the reports and am satisfied with the quality of our drinking water. I have drunk gallons and gallons of the stuff and am satisfied with the taste. But I am concerned with the massive growth of the bottled water industry on several levels.

First off, the *price* of bottled water is ridiculous (please re-read the first three paragraphs). Second, the total *costs* of

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NOVEMBER THROUGH DECEMBER CALENDAR OF PROGRAMS

Unless otherwise indicated, participants meet at the Urban Ecology Center, 1500 E. Park Place. Scholarships are available for all fee based programs. All programs are free and for everyone unless otherwise indicated. For general information call (414) 964-8505 or visit www.UrbanEcologyCenter.org. Programs marked with a * are not accessible for persons with physical disabilities. All others have limited accessibility.

SPECIAL EVENTS

CANDLELIGHT WALK

Saturday, December 17
7 - 9 p.m.

Walks leave every half-hour
starting at 7 p.m.

Music begins at 8 p.m.

For all ages

Free - donations welcome

Explore Riverside Park by candlelight with a guided walk accompanied by poetry and readings of the season. After the walk, return to the Center for hot cider and music with Harvey Taylor and Don Pardee.



INTEREST GROUPS

URBAN ECOLOGY CENTER PHOTO CLUB

Thursdays, November 3 & December 1

7 p.m.

For adults

Free - donations welcome

Explore nature in an artistic light and develop new skills.

URBAN STARGAZERS

Thursdays, November 10 & December 8

7 p.m.

For adults

Free - donations welcome

November: Join us for information and stargazing. Constellation of the month: Draco.

December: Galaxies. Jeffrey Bass of the Milwaukee Public Museum will talk about galaxies. These gigantic floating islands of stars are the largest single structures in the universe. We live in one and the night sky is littered with millions of them just beyond the visibility of the unaided eye. Discover the strange wonder of these ethereal objects and where the brightest and most spectacular of them are found using backyard telescopes. Constellation of the month: Camelopardalis

VEGETARIAN POTLUCK

Thursdays, November 17 & December 15

6:30 -

8 p.m.

For adults and accompanied children

Free - donations welcome



Bring a plate and fork along with your meatless dish to share at our picnic style meal.

EARLY MORNING BIRDWALKS*

Every Thursday (no Birdwalk on November 24th)

8 a.m.

For adults and accompanied children

Free - donations welcome

Interested bird watchers of all ability levels are invited to join us in exploring for bird life. Binoculars available.

URBAN ADVENTURES

Call the Center at (414) 964-8505 to register at least two days before the trip. Trips will run as scheduled, rain or shine.

CAMPING AND CAVING TRIP*

Saturday November 12, 10 a.m. - Sunday November 13, 4 p.m.

For adults and accompanied children ages 12 and older
\$75 (Members - \$60)
Payment due at time of registration.

Experience the view of Lake Winnebago from High Cliff State Park where we will camp Saturday night. Sunday morning we will explore the caves at Ledge View Nature Center near Chilton, Wisconsin and stop for a picnic lunch on the way back to Milwaukee. Cost includes Saturday dinner, Sunday breakfast and lunch, transportation and caving and camping fees. Bring a bag lunch for Saturday, sleeping bag, flashlight, warm clothes, clothes that can get muddy, and a water bottle. The Center will provide tents, cooking gear and eating utensils.

WINTER WEATHER SURVIVAL*

Sunday December 11
2 - 4 p.m.

For adults and accompanied children ages 12 and older
\$8 (Members - \$5)
Families of 4 or more: \$30 (Members - \$16)
Please call (414) 964-8505 to register.

Tips and information on how to enjoy winter weather safely. Includes winter wild foods, what to do in the event of an emergency, and how to be prepared for the unexpected. The indoor portion of the program will be followed by a walk (on snowshoes if weather permits) in Riverside Park, where we will look for examples of edible winter foods. Dress warmly and wear sturdy winter shoes.



HIGH SCHOOL PROGRAMS

CHALLENGE & HIGH ROPES COURSES

Saturday, November 5

8 a.m. - 5 p.m.

For high school age youth

\$25 Limited \$15 scholarships are available. Please call the Center for more information. Please call (414) 964-8505 to register.

Join us at Camp Whitcomb Mason in Hartland for a physical and mental challenge. We will focus on teamwork and overcoming obstacles as we make our way through both the low challenge course and the high ropes course. Please bring a bag lunch and dress for the weather.

FAMILY PROGRAMS

FUNDAMENTALS OF FLIGHT

Saturday,
November 5
2 - 4 p.m.
For children ages 7 and up accompanied by an adult
\$8 (Members - \$5)
Families of 4 or more: \$30 (Members - \$16)
Please call (414) 964-8505 to register.



Have you ever wondered how birds, butterflies and airplanes fly? Come learn the physics of flight through fun experiments appropriate for the whole family. Then we will go outside to observe flight in action.

PRESCHOOL: SQUIRRELS

Saturday, November 12
10 - 11:30 am
For preschoolers accompanied by an adult
\$7 (Members - \$4) per child
Please call (414) 964-8505 to register.

Spend a morning singing songs, playing games and reading stories that will help us learn more about this furry friend! Explore the park through a squirrel's eyes and see if you can spot these scampering scouts! A squirrely snack will be provided!

STORYTIME IN THE PARK

Sundays, November 13 & December 11
1 - 2 p.m.
For preschool - 4th graders accompanied by an adult
\$5 (Members - \$3) per child
Families of 4 or more: \$20 (Members - \$12)
Please call (414) 964-8505 to register.

Listen to nature stories and meet animal friends in our classroom or look for new friends in the park!

FRIDAY FIRE

Friday, November 18
7 p.m. For younger audiences
7:45 p.m. Popcorn and S'mores
8:15 p.m. For all ages
\$5 per person or \$10 a family (Members - free)
Please call (414) 964-8505 to register.

Songs from David HB Drake's latest CD will be featured in his "October Country" concert. David is an award-winning folk singer whose songs of the land and the Great Lakes will engage young and old alike.

MEATLESS OPTIONS LUNCH

Saturday, November 19
10:30 a.m. - 12:30 p.m.
For all ages
\$8 (Members - \$5)
Families of 4 or more: \$30 (Members - \$16)
Please call (414) 964-8505 to register.

After growing up in a "meat and potatoes" family, UEC educator Tory Bahe has recently discovered some delicious alternatives. Join her as she shares her favorite recipes at the tasty lunch buffet that you'll spend the morning creating. You'll leave with a full stomach, new recipes, and an adventuresome cooking spirit!

ANIMALS WITH CLASS

Saturday, November 26
2 - 4 p.m.
For children ages 5 and up accompanied by an adult
\$8 (Members - \$5)
Families of 4 or more: \$30 (Members - \$16)

We will learn about how animals are classified by studying our live reptiles, amphibians and fish as well as mammals and birds. Join us for games, stories, and a short walk through the park.

DISCOVERY HIKE FOR FAMILIES

Sunday, November 27
1 - 2:30 p.m.
For children ages 3 and up accompanied by an adult
\$6 (Members - \$3)
Families of 4 or more: \$24 (Members - \$12)
Please call (414) 964-8505 to register.

Discover nature in a guided walk through the park. In case of inclement weather, we will move our hike inside.

NATURE CRAFTS

Saturday, December 3
10 a.m. - 12 noon
For children ages 6 and up accompanied by an adult
\$8 (Members - \$5)
Families of 4 or more: \$30 (Members - \$16)

Come make nature-inspired crafts. These will make great homemade gifts for the holiday season!

SCIENCE SATURDAYS

Every Saturday
Drop in any time between 9:30 a.m. & 4:30 p.m.
For all ages
Free - donations welcome

Drop in anytime to discover the world of science through interactive activities.

November: Wild About Water. Come learn about the properties of water through a series of experiments.

December: Sound Waves. Experiment with how sound waves travel and learn about animals' adaptations for hearing sound.

ANIMAL FEEDING TIME
Every Saturday (no Animal Feeding Time on December 24th)
1 p.m.

For all ages
Free - Donations welcome

Help feed the Center's resident turtles and snakes as you learn about the animals that inhabit the river valley.

VOLUNTEER OPPORTUNITIES

BURDOCK BRIGADE*

Every Tuesday, 9 - 11 a.m. & Saturdays, November 5, 19 & December 3, 17
9 - 10:30 a.m.
For adults and accompanied children
Free

Improve biodiversity in the park by removing alien plant species.

VOLUNTEER ORIENTATIONS

Saturday, November 12 & December 10
10 a.m. - 12 noon
Free
Please call (414) 964-8505 in advance to register.

Come to this session and learn about the Center's programs and how to get involved.

VOLUNTEER RECOGNITION NIGHT

Wednesday, November 16
7 p.m.
For adults and accompanied children
Free
Please RSVP by November 4, to Kimberly Fein, (414) 963-0166

Come and enjoy tasty treats made by our Board and staff as we celebrate volunteer accomplishments from the past year.

MONDAY NATURALIST WALKS

Mondays, November 14, 28 & December 12, 26
11 a.m. - 12 noon
For volunteers
Free
Please call (414) 964-8505 in advance to register.

Join Urban Ecology Center staff on the 2nd and 4th Monday of each month for an hour-long walk through Riverside Park and adjacent green spaces. Build your naturalist skills and get to know the Center staff on these fun and informal walks.

ADULT LEARNING

MEET NATURE AUTHOR STAN TEKIELA

Sunday, November 13
For adults
Free

Stan Tekiela is an award-winning author of regional field guides. Please join us for the following events co-sponsored by the Friends of the Milwaukee Public Library.

UNCOMMON FACTS ABOUT WISCONSIN BIRDS

1:30 p.m., Central Library
Centennial Hall
Call (414) 286-3021 for more information.

Hear Stan lecture about the mysterious and comical lives of our common backyard birds, followed by a book signing and...

WALK WITH STAN THROUGH RIVERSIDE PARK

4 p.m., meet at UEC
Join Stan on a hike along the Milwaukee River.

TROPICAL BIRDS AND AGRICULTURE IN COSTA RICA

Speaker:
Viviana Ruiz Gutierrez,
Ph.D. Candidate,
Cornell University,
Lab of Ornithology
Wednesday, November 27
7 - 8:30 p.m.
For adults
\$5 (UEC Members - free)

In the southern region of Costa Rica, the majority of the remaining forest is in the form of small patches surrounded by coffee farms and pastures. We will take a photographic journey down to the tropics to see which forest birds are using these habitats, how they are using them, and how this affects their populations.

CENTER CLOSINGS

The Center will be closed on
November 24 & 25,
December 24 & 25
and January 1

COSTA RICAN RAINFOREST EXHIBIT OPENING RECEPTION

Friday, November 4
6 - 8 p.m.
For adults
Free - donations welcome
Please call (414) 964-8505 to register.

In 2004, Kristin Gjerdsset led a trip to the Trimibina Rainforest Center in Costa Rica with her art students. The result is a unique collection of artwork in a variety of media inspired by the rainforest. Please join us for a chance to meet Kristin and the students whose work will be on display. A portion of the sales benefit the Tirimbina Rainforest Center as well as our Center.

MAKING GREEN SENSE: GREEN BUILDING AND REMODELING

Saturday, November 12
2 - 4 p.m.
For adults
\$5 (Members - free)
Please call (414) 964-8505 to register.

Anyone looking to buy, build or remodel a home can benefit from the reduced energy and maintenance costs, increased comfort and safety, and reduced environmental impact of green building. This seminar will introduce you to the Green Built Home and Green Built Remodeled Home programs and provide you with ideas for incorporating green building into your next project.

INVADERS IN THE FOREST: CURRICULUM ACTIVITIES ON INVASIVE PLANTS

Monday, November 14
4 - 6 p.m.
For educators
Free
Please call (414) 964-8505 to register by November 10th

Using Betty Czarapata's book *Invasive Plants of the Upper Midwest* as a reference, David Eagan teaches invasive plant activities that are designed to introduce students to invasive plants and help them discover their adaptive and competitive characteristics. Curriculum activities are geared for upper elementary grades through high school, though many can be adapted to all ages. Participants will receive copies of Czarapata's book and print and electronic copies of the *Invaders of the Forest* educators guidebook. Eagan coordinates the "Invasive Plants of the Future" project sponsored by the UW Madison Herbarium and the DNR. This is funded by a 2005 WEEB grant.

SANDHILL CRANES AT JASPER PULASKI

Saturday, November 19
10 a.m. - 9 p.m.
For adults and accompanied children ages 8 and up
\$25 (Members - \$20)
Please call (414) 964-8505 to register.

Each fall tens of thousands of sandhill cranes congregate in the shallow marshes of the Jasper-Pulaski Wildlife Area in Indiana to reinforce pair bonds. Travel with Center staff to witness one of the Midwest's most amazing wildlife spectacles. Bring a bag lunch for a picnic at Indiana Dunes State Park. We will also stop for dinner at a restaurant.

LEAVES OF GRASS-WHITMAN'S VISIONARY NATURE POETRY

Tuesday, November 29
7 p.m.
Co-sponsored by Milwaukee Public Library and Woodland Pattern
For adults
Free - donations welcome
Please call (414) 964-8505 to register.

"Give me Nature, give me again O Nature your primal sanities!" This year marks the 150th anniversary of the publication of Walt Whitman's revolutionary book *Leaves of Grass*, in which nature holds a large and central place. Former Milwaukee Poet Laureate Antler, and 1985 Whitman Award winner Jeff Poniewaz, will take turns sharing Whitman's greatest nature poems.

STUDENT INTERNS RESEARCH PROJECTS

Tuesday, December 13
7 - 8:30 p.m.
\$5 (UEC Members - free)

This program will highlight student research projects conducted in Riverside Park throughout the year. Each student will present a short summary of their work.

CHRISTMAS BIRD COUNT

Saturday, December 17
8 a.m. - 12 noon
For adults
\$5 (payable to the National Audubon Society)
Please call (414) 964-8505 to register.

Join us for the annual bird count sponsored by the National Audubon Society. We will start at our observation tower, work our way up the east side of the Milwaukee River, stop for coffee, then work our way south along the west side of the river.

URBAN ECOLOGY CENTER TOURS

WEDNESDAY WALKS WITH KEN*

Every Wednesday
9 a.m. - Urban Ecology Center building
Riverside Park
10 a.m. -
For adults and accompanied children
Free - donations welcome
Call ahead to confirm,
(414) 964-8505.

Explore Riverside Park and/or our new "green" facility with our Executive Director, Ken Leinbach..

ECOLOGY CENTER TOURS

Every Wednesday
5:30 p.m.
For adults and accompanied children
Free - donations welcome
Call ahead to confirm,
(414) 964-8505.

Explore our new "green" facility with our Director of Education Beth Fetterley.

WISH LIST

If you have a donation for the Center, please call 964-8505. The Center is in need of the following items:

- Children's gloves or mittens
- Gently used sweatpants of all sizes
- Winter jackets (school age children's sizes)
- Winter boots
- Stethoscope
- Large copy machine
- 18-inch reflecting telescope with Dobsonian mount
- Portable fabric covered display board
- 36" Lateral 2 drawer file cabinet
- Firewood
- Juggling stuff
- Step stools
- Desk/floor lamps
- Folding room divider screens
- \$40,000 for climbing wall
- Laminator
- Stopwatches

Hours: Monday - Thursday 9a-7p, Friday - Saturday 9a-5p, Sunday 12 non-5p

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		9a Burdock Brigade	9a Building Tour with Ken 10a Walk with Ken	8a Birdwalk	4	5 Science Saturdays (every Saturday) topic: Wild About Water 8a Challenge & High Ropes Course 9a Burdock Brigade 1p Animal Feeding 2p Fundamentals of Flight
		9a Burdock Brigade	5:30p Building Tour with Beth 7p Tropical Birds and Agriculture in Costa Rica	7p Ecology Center Photo Club	6p Costa Rican Rainforest Exhibit Opening Reception	
6	7	9a Burdock Brigade	9a Building Tour with Ken 10a Walk with Ken 5:30p Building Tour with Beth	8a Birdwalk 7p Urban Stargazers	11	12 Camping and Caving Trip leaves at 10a 10a Preschool: Squirrels 10a Volunteer Orientation 1p Animal Feeding 2p Green Building and Remodeling
13 Camping and Caving Trip returns at 4p 1p Storytime in the Park Meet Stan Tekiela 1p Wisconsin Birds - at Centinel Hall 4p Walk - at UEC	14 11a Monday Naturalist Walk 4p Invaders in the Forest	9a Burdock Brigade	9a Building Tour with Ken 10a Walk with Ken 5:30p Building Tour with Beth Volunteer Recognition Night - 7p	8a Birdwalk 6:30p Vegetarian Potluck	18	19 9a Burdock Brigade 10a Sandhill Cranes at Jasper Pulaski 10:30a Meatless Lunch 1p Animal Feeding
		9a Burdock Brigade	9a Building Tour with Ken 10a Walk with Ken 5:30p Building Tour with Beth	24 Center Closed for Thanksgiving Holiday	25	26 1p Animal Feeding 2p Animals with Class
		9a Burdock Brigade 7p Leaves of Grass	9a Building Tour with Ken 10a Walk with Ken 5:30p Building Tour with Beth	30		
27 1p Discovery Hike for Families	28 11a Monday Naturalist Walk	9a Burdock Brigade	9a Building Tour with Ken 10a Walk with Ken 5:30p Building Tour with Beth			

Contact the Center for details (414) 964-8505 or visit www.UrbanEcologyCenter.org.

Hours: Monday - Thursday 9a-7p, Friday - Saturday 9a-5p, Sunday 12 non-5p

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				8a Birdwalk 7p Ecology Center Photo Club		3 Science Saturdays (every Saturday) topic: Sound Waves 9a Burdock Brigade 10a Nature Crafts 1p Animal Feeding
4	5	6	7	8a Birdwalk 7p Urban Stargazers: Galaxies	9	10 10a Volunteer Orientation 1p Animal Feeding
11 2p Winter Weather Survival 1p Storytime in the Park	12 11a Monday Naturalist Walk	13 9a Burdock Brigade 7p Student Interns Research Projects	14 9a Building Tour with Ken 10a Walk with Ken 5:30p Building Tour with Beth	15 8a Birdwalk 6:30p Vegetarian Potluck	16	17 8a Christmas Bird Count 9a Burdock Brigade 1p Animal Feeding Candlelight Walk 7p walks leave every half-hour
18	19	20	21	8a Birdwalk	23	24 Center closed for Christmas holiday
25 Center closed for Christmas holiday	26 11a Monday Naturalist Walk	27 9a Burdock Brigade	28 9a Building Tour with Ken 10a Walk with Ken 5:30p Building Tour with Beth	29 8a Birdwalk	30	31 1p Animal Feeding

THANK YOU FROM THE CENTER

IN-KIND DONATIONS:

Jeff Anderson - athletic equipment & puppets
 Kathy Beaver - plant feed & equipment
 George & Melanie Bezold - firewood
 Russ Bieniek - firewood
 Joyce Tang Boyland - ironing board
 Art Brooks - scanner
 Tom Chapman - magazines
 Sandra Christensen - jackets & sweatpants
 Vivian Corres - cameras
 John Czukas - firewood
 Danni Gendelman - books
 Max & Doris Gendelman - piano, ladder, carts, frying pan, tools
 Don Haack - children's book
 Jerome Hanson - cross country skis
 Judith Huf - books
 Susan Jones - bike rack
 Joel & Mary Kriofske - firewood
 Jim Maurer - rocks, fossils & books
 Phyllis McKenzie - field guides & books
 Peter McMullen - scanner
 Pat Mueller - wall mount pencil sharpener
 Patrick & Linda O'Hara - bio-orb, filing cabinet
 Marvin B. Olson (in memory of Herman F. Olson) - cast iron school bell
 Virginia Palmer - magazines
 Brian Reilly - tote bags, lunch bags, books, shirts, hat
 Mary Lou Stebbins - cross country skis
 Jane Waldbaum &

Steve Morse - firewood

WELCOME NEW AND RENEWING MEMBERS:

Kate O. Adams
 The Bart Adrian Family
 Louis & Mary Agnew
 Mary Allegre
 Marjorie Altman
 Laura Anderko
 W. Paul & Deanna C. Andre
 Erin Barnes
 Mrs. Alton Bathrick
 Inga & Freidrich Bauer
 David Baum
 John Becker & Mary Stort
 Randy Beckwith
 Chris Beimbom
 Joseph & Janie Besharse
 Sandra Biba
 Jozef Bieniek
 Bryan Bloemer & Jane Harris
 Nick Bonifas
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 Mark Bradley & Anne Hansen
 Deanna & Robert Braeger
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 Ben Calsbeck
 Elin & Hilary Chavez
 Sarah Christman
 Eileen Ciezki
 Brian J. Cummings
 Mary Cywinski
 Brad Dallet
 Mark Damkoehler
 Eddee Daniel

Gabrielle Davidson & Rob Lyon
 Leah Dobkin
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 Howard & Eileen Dubner
 Joan Dukes
 Clayton & Janet Eggie
 Claire Ellington
 William C. Erdmann
 James C. Everson & Mary A. Mitchell
 Kristy Eyler
 David Felland & Diana DelRosso
 Merridith Frediani
 Kate Gay
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 John & Mary Ellen Germanotta
 George Gilman
 John & Katie Glaser
 Michael Gould & Allison Ritter
 Larry & Stephanie
 Govin-Matzat
 Penny Greene
 Dean, Chrissy & Matthew Gruber
 Margaret Gruna
 Don Haack & Karen Smith
 Julie Handa
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 Karon Kiffel

Rorry Kinnally
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 Earl Lemon & Jean Gurney
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 Terry Weckler
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 Betty White
 David & Bess White
 Wesley Wilson
 Polly & Rick Wisdom
 George Woodland, Sr
 Diane Wright
 Frances & Prescott Wurlitzer
 Lori Zahorodny
 Thomas J. Zall
 Maria Zaroni

A special thanks goes to the following organizations who have become UEC Community Partners. If your organization or business is interested in becoming an UEC Community Partner, please contact Diane Burnham at (414) 964-8505, x104, or dburnham@urbanecologycenter.org.

Lake Park Friends www.lakeparkfriends.org

Cambridge Woods Neighborhood Association
www.cambridgewoods.org

A special thanks goes to the following businesses for their continued in-kind donations.

Alterra Coffee Roasters

Bayside Garden Center

Hoffers Tropic Life Pets

CyberLynk Network, Inc.

BOTTLED WATER: IT'S MORE THAN 128 GALLONS FOR \$1

continued from page 5

bottled water are astronomical. Just consider the resources needed to pump, bottle, box up, transport and then retail something that is already available in every house and building in this city. Then add the costs of dealing with the empty containers. This is a cost *not* borne by the bottled water companies. It is a cost borne by the consumer and the community for waste disposal and the continued filling of landfills.

These are the obvious costs, but possibly even more important are the environmental costs. Pumping by bottled water companies lowers the groundwater levels, drying up neighboring wells, springs and streams (see Robert Glennon's *Water Follies: Groundwater Pumping and the Fate of America's Fresh Waters*, Island Press, 2002). Water that should be available for people, animals and trees is now shipped across the country and sold.

My suggestions for the average water drinker would be to drink lots of tap water, fill a re-usable high quality water bottle (i.e. Nalgene) when you need portable water, read the Water Works quality reports and insist that clean, affordable water be kept available to all residents.

MEMBERSHIP

Membership benefits include discounts on programs and products, invitations to special events, opportunities for neighborhood stewardship and a one year newsletter subscription. For more information, please visit our website at www.UrbanEcologyCenter.org.

- Individual - \$25
 (includes 1 guest)
- Family - \$35
- Students - \$12

DONATION (IN ADDITION TO MEMBERSHIP)

You're doing a terrific job. Please accept this donation for the support of programs and services.

- \$50
 \$100
 \$250
 \$500
 \$1000
 \$2500
 Other \$ _____

Total Enclosed \$ _____

I would like to volunteer at the Center. Please call me.

Name _____

Address _____

City _____ State/Zip _____

Phone _____

Email _____

Charge my membership to: Master Card Visa

Card Number _____ - _____ - _____ - _____

Expiration Date ____/____/____

Signature _____

Date _____

To use your credit card please call (414) 964-8505.

Please make your check payable to:
Urban Ecology Center and return it with this form to:
 Urban Ecology Center
 Riverside Park, 1500 E. Park Place
 Milwaukee, WI 53211



**LOOK AT THAT SMILE! MANY THANKS TO
 TREK BICYCLES AND WHEEL AND SPROCKET
 (SEE DETAILS ON PAGE 2)**



Milwaukee, WI 53211
 1500 E. Park Place
 Riverside Park



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