



Missouri Sierran

One Earth  One Chance

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Sierra Club Reaches Landmark Agreement with KCP&L



by Melissa Hope, Chapter Development Associate

On March 20th, 2007, Sierra Club and Concerned Citizens of Platte County announced a groundbreaking global warming agreement with Kansas City Power and Light (KCP&L) that ended all lawsuits against the company. In return for dropping all legal actions and challenges to the building of a new 850 MW power plant near Kansas City the company agreed to provide the largest investment in clean energy Sierra Club has secured to date (400 MW of wind and 300 MW of energy efficiency). The agreement allows the one coal plant under

construction (out of their original plan for five coal plants) to continue on the condition that all 6,000,000 tons of annual CO₂ emissions from the new plant will be offset with investments in energy efficiency and wind power. This agreement lays the groundwork to ensure that this one coal plant will be one of the last (if not the last) coal plant built in the Missouri/Kansas region.

The essential elements of the agreement include:

- KCPL agrees to build only one 850 MW coal-fired boiler (Iatan 2) at an existing facility, rather than the 5 new boilers in a multi-state area initially proposed in 2001.
- KCPL will offset the entirety of the carbon emissions (6,000,000 tons annually) from

the additional boiler through the addition of 400 MW of wind, 300 MW of efficiency, and a yet to be determined amount of additional wind or efficiency or the decommissioning of an additional boiler at another facility. These offsets will largely be implemented by 2010 and fully implemented by 2012.

- The agreement includes significant reductions—some 9,100 tons annually—in criteria pollutants from Iatan I & II and La Cygne I & II power plants. These reductions will aid the Kansas City metropolitan area in achieving attainment status with regard to federal air pollution standards.
- Net metering will be established within the

continued on page 10...KCP&L Agreement

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Participants in the March 20, 2007 press conference announcing KCP&L, Sierra Club and Concerned Citizens groundbreaking settlement agreement. From left to right: Jerry Shechter (Sustainability Coordinator of the Office of Environmental Quality of the City of Kansas City, MO), Susan Brown (Concerned Citizens of Platte County), James Joerke (Air Quality Program Manager, Mid-America Regional Council), Melissa Hope (Missouri Sierra Club staff), Crag Volland (Kansas Sierra Club), Frank Drinkwine (Kansas Sierra Club), John Marshall (Senior Vice President - Delivery, KCP&L)

Photo by Claus Wawrzinek

Dates You Need to Know

May 5-6	Chapter ConeCom/ExCom meeting: Kansas City; contact James Turner, jlturner@socket.net
May 27	Deadline for July-September Missouri Sierran
July 21-22	Chapter ConeCom/ExCom meeting: Springfield; contact James Turner, jlturner@socket.net

Climate Change in Congress



by Henry Robertson, Energy Chair

You wouldn't know it from the media, but there are actually bills in Congress that address climate change.

It's about time. The political will has been building from below, with individuals and businesses changing their ways, towns signing up to the U.S. Mayors Climate Protection Agreement (which the Sierra Club has adopted as its Cool Cities campaign) and many states passing laws for cleaner electricity, more efficient buildings and the like. A federal law, if it were serious enough, would do in one swoop what all these piecemeal efforts are groping towards.

Best known is the McCain-Lieberman bill, officially titled the Climate Stewardship and Innovation Act (S. 280). It would cap greenhouse gas (GHG) emissions by 2010 at the level where they stood in 2000. This is weaker than the inadequate Kyoto Protocol.

Only two bills would really do the job, setting an ambitious goal for GHG emissions of 80% below 1990 levels by 2050. Their stated objective is to avoid a temperature rise of 3.6°F (2°C) and hold the CO₂ concentration in the atmosphere below 450 parts per million; it's currently 381 ppm and growing at about 2 ppm per year.

These bills are the Safe Climate Act (H.R. 5642) introduced by Representative Henry Waxman (D-CA) and the Global Warming Pollution Reduction Act (S. 309) sponsored by Senators Bernie Sanders (I-VT) and Barbara Boxer (D-CA). The Sierra Club supports Sanders-Boxer as the most effective.

Both bills attack the problem on multiple fronts, requiring more fuel-efficient vehicles, more renewable electricity generation, and tougher efficiency measures for the use of electricity.

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line—not a couple of days or a week later! Submissions received after the deadline are subject to the possibility they won't appear in the issue: you will feel bad and we will

Items for publication: Contact **Claus Wawrzinek** via E-mail at claus@missouri.sierraclub.org or phone (816) 517-5244, **PRIOR TO SENDING**, for information on how to submit articles.

The editors reserve the right to edit articles! Material may be edited for length, content, or clarity. It is our job to help you communicate. If you have strong creative ownership of your writing, and wish to review your edited article before publication, *consider your deadline 10 days prior to the published deadline*. With notice, we will be happy to work with you.

Reproduction quality photographs (prints) or artwork are dearly welcome. Please: send us photos...

The published deadline is the real, honest-to-goodness, drop-dead dead-

feel bad. Call us nasty, but we are determined this newsletter will come out on time!

The *OZARK SIERRAN* is produced on a Macintosh computer, so we strongly prefer to receive material electronically (E-mail), or on a CD, **WITH A HARD COPY OF THE TEXT**. Typed articles are also OK (must be received a few days before the deadline). All submissions must include name, address, and phone number of the author. If you want your submission returned (including your CD), please include a SASE.

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Renewable Electricity Standards

Both bills include a Renewable Portfolio Standard. It would be more convenient to call this a Renewable Electricity Standard (RES). This requires utilities to get an increasing amount of their electricity from renewable sources, whether they generate it themselves or buy it on the market. The targets start low and increase over time to let the utilities grow into them. The federal goal would be 20 percent renewable generation by 2020.

Nearly half the states have some form of RES. (As usual, the Show-me state won't do anything until it's been shown how by at least 45 other states. But we're working on it.) Most of them have much weaker goals than 20/20. They also differ in ways that could make them incompatible. There are different definitions of renewable energy—in Pennsylvania even coal can be a "renewable" resource. Some have credit-trading programs while others don't.

A strong federal RES would be a big advance.

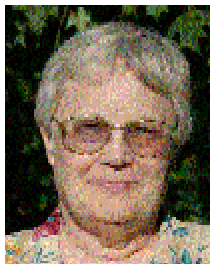
Cap-and-trade

Both bills rely on government regulation, but Waxman's includes a market-based cap-and-trade scheme for GHG. Sanders-Boxer does not, but it allows the EPA to create one by regulation.

The whole idea of cap-and-trade is distasteful. First, a level of allowed pollution is set. Then the emissions below this ceiling are carved up into rights to pollute and allocated to the polluters. The ones that pollute less than their proportional share can sell their allowances; businesses that pollute too much have to buy. The hope is that most companies will find it more in their interest to make a profit, not a loss, on the deal and will lower their emissions so that they will have more allowances than they need.

continued on page 5.....**Climate Change**

Our Failing Effort to Conquer the Natural World



by Becky Denney, Missouri Chapter
Conservation Chair

When the Taum Sauk Reservoir collapsed above Johnson's Shut-Ins State Park on December 14, 2005, questions about the Park

Superintendent and the condition of his three children were foremost on our minds. But as they recovered and we breathed thanks that no one else was in the park, we speculated on how it could have happened. Everyone became aware of dam safety in Missouri. We suddenly found out that the State of Missouri had no jurisdiction over federal projects in Missouri. The complete inspection responsibility belonged to the Federal Energy Regulatory Commission. The Taum Sauk Reservoir had passed an inspection in August of 2005.

Union Electric built the Taum Sauk Reservoir contending that it did not need a Federal permit to built it and to operate it. When it was dedicated in October, 1963 there had been no federal inspection of the construction. The U.S. Supreme Court decided in 1965 that it was under federal jurisdiction. Now we know that the earthen dam had rock "fill" material instead of bedrock, and the design and construction methods were substandard even for the 1960's. Would federal oversight have meant that a spillway was included in the design? That might have prevented the total failure—particularly since overtopping was the force that precipitated the collapse.

As required, the Taum Sauk plant had an emergency plan. According to the time line established the morning that Taum Sauk ruptured, the plant supervisor didn't follow the emergency plan until at least 30 minutes after the water hit the USGS station at Highway N. A USGS study released on December 14, 2006 estimated the velocity of the water:

"At its peak, the water rushed down the side of the mountain at a rate of 289,000 cubic feet per second, roughly equal to the flow of the Missouri River at three to five feet over flood stage. High water marks along the water's route down the mountain indicated that it reached depths of 50 feet or more. The subsequent flood of the East Fork of the Black River was approximately four times larger than a 100-year flood," said report author Paul Rydlund.

"During a 100-year flood, water would flow through the river at 21,900 cubic feet per second," Rydlund said. "At the peak flow of this

release, it was coming through at 95,000 cubic feet per second."

A simple check of the history of dam failures finds that there are many reasons for failure. According to Dr. J. David Rogers of the Department of Geological Engineering at the University of Missouri-Rolla, the early concrete dams were much more prone to fail than earthen ones. Dr. Rogers grew up in California and is famous, among others things, for his re-study of the St. Francis Dam failure of March 12, 1928. It was a failure which sent a wall of water 185 feet high down the San Francisquito Canyon to the Santa Clara River and then to the Pacific for a total distance of 58 miles.

The St. Francis Dam was considered the "Titanic of Civil Engineering." The dam was designed and constructed between 1924 and 1926. It was at full reservoir level for only five days before it collapsed. The collapse in 1928 was one of the greatest disasters in California history with a loss of 420 lives and millions of dollars of damage. Rogers' website claims it is the worst "American Civil Engineering failure of the 20th Century."

Until the collapse of the St. Francis Dam, expert input on geology of the sites used for dams was not common. In fact, it was sited against a landslide. An investigation as of 1992 found a list of 254 American dams greater than 35 feet in height that were constructed against old landslides.

According to the interview conducted with Dr. J. David Rogers, a concrete gravity dam was supposed to be a conservative engineering structure, but in this case the stability calculations were eventually found to be off by a factor of 240 percent. Debate about uplift pressures developing beneath concrete dams came after the St. Francis dam failed and continued into the 1950's. In fact, Hoover Dam which was completed in 1935 had major foundation grouting done in the mid 1950's when excessive hydraulic uplift pressures were measured. Even when the Malpasset Dam failed in 1959 it took years for the uplift pressures to be understood.

The design for the Mulholland Dam (for the Hollywood Reservoir) which was another concrete dam built under William Mulholland was inspected by John L. Savage, the Chief Engineer for the Bureau of Reclamation. He informed the Los Angeles Department of Water and Power that the dam needed to be "retrofitted." So the Hollywood Reservoir was drawn down and the work quietly done by 1933.

Another reservoir failure much later in

California ended differently. But again it could not be emptied quickly. On December 14, 1963 abutment leakage suddenly appeared at Baldwin Hills Reservoir in California. By 12:30 p.m., after several hours of checking, an all-out attempt was made to drain the reservoir. By 3:30 p.m. the Baldwin Hills Reservoir breached with less than 20 percent of the reservoir drained.

The Laurel Run Dam failure resulted in a ten year legal battle over settlements with victim's families. There were 39 victims with \$5.3 million damages. But *The Tribune-Democrat* (Johnston, PA) had to unseal the records later to find that the failure of the dam during heavy storms was due to a history of poor maintenance and ignored warnings of the condition of the dam.

Early dam legislation in Missouri was passed in 1889 but was concerned with damages from construction and lake formation and was called the Dams, Mills and Electric Power Law. We had dam failures at Lawrenceton in 1968, Washington County in 1975, and Fredericktown in 1977. By 1979 the Missouri Legislature became aware that, according to the U.S. Army Corps of Engineers' inspections of dams in our state, we led the nation in the total number of unsafe dams. The passage of HB 603 regulated dams over 35 feet high, but exempted dams used primarily for agriculture and dams regulated by state or federal agencies.

On January 22, 2006, after the Taum Sauk collapse, the *Post-Dispatch* ran titles like "Missouri leads the nation in unregulated 'high-hazard' dams." *The Southeast Missourian* reported on January 31, 2006 that the Army Corps said we had 390 high-hazard dams—dams that can kill if they rupture.

The *St. Louis Post-Dispatch* pointed out that there are hundreds of dams in Missouri and Illinois that need repairs; that lack emergency plans; and that overworked inspectors can't force owners to make repairs. More than half of the 641 dams in Missouri are either high-hazard, significant hazard or not regulated.

Governor Blunt ordered a review of dam safety rules by December 13, 2005. He supported the Department of Natural Resources (DNR) recommendations made public February 13, 2006 that were in line with the Federal Emergency Management Agency's model dam safety law standards. Most dams that are at least 25 feet high or that hold 50 acre-feet of water would be inspected every five years. (An acre-foot is the volume it takes

continued on page 4...**Conquer the Natural World**

to cover an acre with one foot of water.) The recommendation increased the number of dams inspected by DNR from the 2005 figure of 600 to 5,000. Dams regulated by the Federal Power Act, agricultural dams, and dams constructed for conservation or irrigation would no longer be exempted. The state of Missouri now regulates only non-agricultural dams with a 35 foot or more height.

The *Post* commented on December 15, 2005 that some agricultural dams are more than 50 feet tall. James Alexander, chief engineer for the Missouri dam safety office was quoted:

“A lot are in overpopulated areas,” Alexander said. “I doubt very seriously when people living downstream of these agricultural dams are going to notice the difference between agricultural water and water that would come out of a conventional dam.”

The *Post-Dispatch* also reported that Martin McCann, director of the National Performance of Dams Program at Stanford University says that nationally there are ten to 20 dam failures a year but deaths are rare. He thought we needed to see dam failure in perspective.

In *The Southeast Missourian* Brad Iarossi with the American Society of Civil Engineers said that the American dam system has gotten a “D” on its annual report card each year since they started rating them on dam safety in 1998.

Despite the rhetoric of Governor Blunt last year, SB 1236 was passed by the senate but not the House. This year there is a bill introduced in the house and also one in the senate. As they were introduced, neither one permitted most agricultural dams and both raised the definition of a dam to 50 feet which is worse than the bill we have now. A high-hazard dam was defined as loss of human life being probable or expected.

On February 27, 2006, House Bill 159 came out of committee radically changed. The regulations currently define dams as being 25 feet or more in height with a storage volume of at least 50 acre-feet of water. High Hazard dams are to be inspected at least every three years and significant hazard dams inspected at least every five years. Dams licensed under the Federal Power Act such as Taum Sauk are to be inspected yearly when before the state had no jurisdiction. Unfortunately, the agricultural dam exemption may still remain unless the state council on the advice of the chief engineer determines the dam to be a high or significant hazard dam or reservoir.

On January 22, 2007, the Army Corps of Engineers began to lower the water level of

Lake Cumberland in Kentucky. Wolf Creek Dam was placed on a list of “structures” that have a high risk of failure after a post-Hurricane Katrina risk assessment of 400 Corps dams. An earthen dam with a concrete core, the Wolf Creek Dam is nearly a mile long and 240 feet high. It was started in 1938 and completed in the early 1950’s as part of a federal plan to control floods on the Ohio and Mississippi Rivers. Should the dam breach, the failure could result in a great disaster. A total of \$3.5 billion in damages is estimated.

Much of the sediment and debris from the December 14, 2005 Taum Sauk breach has been moved so it will not go down river into Clearwater Lake. But there is still sediment below the Lower Reservoir that needs to be removed and stabilized. AmerenUE has decided to rebuild the Taum Sauk Reservoir. The Federal Energy Regulatory Commission (FERC) announced environmental scoping meetings scheduled for March 2007 for the rebuilding of Taum Sauk Plant 2277.

AmerenUE has yet to complete its plans to re-establish the Lower Reservoir. The East Fork of the Black River remains unusable for us and not even in a stable ecological state—yet AmerenUE is dependent on that very stream to fill the Lower Reservoir and then use the water for construction and operation. As dams are built they are indeed dependent on the natural materials available, the bedrock, and water that can easily and cheaply be obtained.

Now let me tell you about the dam in the Black River watershed that is a greater danger to people and property than Taum Sauk Reservoir. When Clearwater Dam was completed in 1948 its main purpose was to prevent downstream flooding and damages. The Corps website says Clearwater Dam has prevented \$217 million in flood damages.

Inspection reports from the Corps in late 1977 stated that the safety of the embankment at high upper pool was questionable. On October 15, 1987 an inspection report said that “Construction of the planned seepage control berm and right abutment grouting is necessary to ensure the continued structural safety of Clearwater Dam.”

In 2003 a sink hole was discovered which will take millions of dollars and five years to fix. On August 30, 2006 a large hole 30 feet beneath the base of the dam appeared causing engineers to believe that materials were moving from the dam. The core showed a mixture of clay silt, gravel, and water. Jason Lindsey reported that:

“Engineers say seepage has been occurring at Clearwater Dam since its completion in 1948, primarily because the bedrock is dolomite, a highly fractured rock subject to

wear and erosion.”

The sinkhole found in 2003 was repaired, but a concrete curtain is to be built so a \$17 million contract was awarded for Phase I work to be done from June 2006 to July 2007. In December 2006 during the drilling in the bedrock and grouting done to fill up the cavities or holes three pockets of sandy soil were detected within the dam. Based on information determined from core samples, engineers say they believe the dam’s core is intact. The Phase II contract to complete the cutoff wall, which has been described as a dam within a dam, should be awarded in mid 2007.

A new (published in August 2006) study based on modern concepts of “state based soil mechanics” found that there was cracking in the core that had not been recognized in the design of the dam.

My early personal experience and dislike of dams stems from the fight against damming the Current River. The Corps of Engineers had plans to dam it but canoers from both St. Louis and Kansas City were up in arms. Leonard Hall wrote a marvelous book called *Current River Running* which we all loved. Politicians were taken on float trips with the result that in 1964 the Current and Jacks Fork were designated as a national scenic riverway.

Two dams were stopped after construction had actually started. One was the Echo Park Dam which would have been near the junction of Yampa and Green Rivers in Colorado within Dinosaur National Monument. David Brower and the Sierra Club won that fight but compromised by allowing the Glen Canyon Dam to be enlarged. That was a bitter compromise to some.

The other dam that was stopped after construction started was the Meramec Dam. Dr. Rogers has an interesting presentation on his website about the Meramec Dam Basin plans and defeat. The first and largest dam planned was a zoned earthfill embankment for flood control and recreation. There were a total of 31 reservoirs planned for the Meramec Basin Project. Evidently there was a statement in the revised Environmental Impact Study (EIS) that the Indiana bats and the gray bats found in some of the more than 100 caves located in the project area would be extinct in 15–20 years anyway. But, thanks to everyone that helped win that fight, we still have those caves and we still have Indiana Brown bats and grey bats in Missouri caves. 🦇

My City Was Gone

by Dennis Love

published by William Morrow

Review by Caroline Pufalt

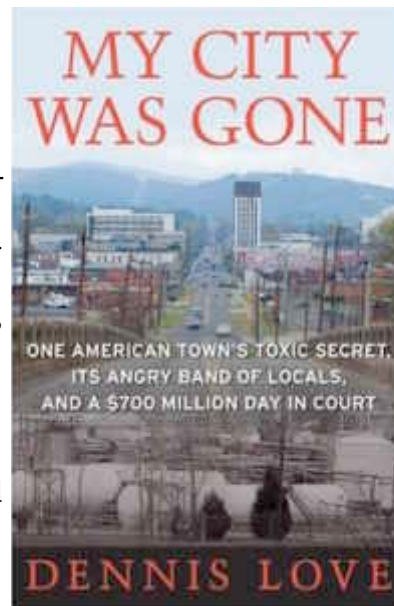
Sierrans may remember Anniston, Alabama as “that town Monsanto polluted.” Readers will recall reading in 2003 of the unfolding trial regarding how decades of careless disregard for public health left the community contaminated with PCBs and it eventually resulted in a “\$700 million day in court.” Now, a book by Anniston native, Dennis Love, recounts the human drama behind the city’s struggle with its toxic legacy. The book’s title, *My City Was Gone*, captures how Love felt returning to his beloved hometown to cover the issue.

Love focuses on city leaders and citizens such as the mayor, a judge, and community activists to tell a story of how this mid sized city faced multiple problems. In addition to PCB contamination, the city faced the possible loss of its Army Depot as well as controversy over incineration of weapons stockpiles at that same Depot. Its citizens drew strength from their community as well as from some unlikely sources. One judge admits he sometimes asked himself, what would Andy do?

Andy Griffith that is. Readers will come to know this cast and will likely admire their determination, faith in their city and hard work.

Like too many towns, Anniston’s residents lived in racially separate neighborhoods. Although the PCB pollution threatened everyone, its African American citizens were at greatest risk due to their proximity to pollution sources. After years of increased illnesses and death, many of those residents later learned that their yards were contaminated and houses devalued. A central character in *My City Was Gone* is David Baker, a black community activist who led the organizing effort for justice. His story is compelling, inspiring and tinged with sadness as he lost a younger brother to illnesses likely related to PCB exposure.

Love’s book includes highlights from the trial and evidence submitted. But his focus is not on environmental impacts or the science behind them. Instead he brings the story of a



struggling town to light through the lives of its citizens and his own hometown memories. Love, a journalist, is well suited to take us the behind the headlines story in a readable account. But there is enough information on the dynamics of the pollution to understand the gravity of the town’s problems.

There is another angle for Sierrans in this book because Anniston was also struggling with the area’s Army Depot and military facility used to incinerate old ammunition and other hazards. Despite the controversy, Anniston eventually accepted the incineration operation. But in the meantime the Sierra Club and others were vigorously fighting for an alternative to incineration in Rocky Flats facility in Colorado.

Why read *My City Was Gone*? One reason is to learn how varied citizens pulled together to save their health, homes and ultimately their town. Another reason to read this book is to remind us that without adequate environmental laws and non partisan enforcement, it may be too easy for another town to find itself in Anniston’s position. 📖

Climate Changecontinued from page 2

Depending on your point of view, emissions trading by market mechanisms is the ideal, or at least the pragmatic, way to do things; or it’s another attempt to privatize the commons, turning the atmosphere into corporate property and developing nations into plantations to grow energy crops for the industrial world.

One of these days I’ll wrap my head around this complex subject and be able to pontificate with authority. For now, I’m keeping an open mind.

The devil is in the details. Carbon trading might work if the program is designed right. Sanders-Boxer, for example, would ratchet down the carbon cap if and when carbon-controlling technologies became cheap enough, so there wouldn’t be a permanent right to pollute at the initial level.

Rest assured, however, that the carbon-intensive industries will lobby furiously for loopholes.

Carbon sequestration

All of the bills stress technological innovation and assume the continuation of economic growth. Sanders-Boxer in particular, in order to reduce CO₂ emissions from electricity generation, relies heavily on geological carbon sequestration.

Carbon sequestration, or carbon capture and storage (CCS), is the idea that we can keep CO₂ out of the atmosphere by putting the carbon back where it came from—underground or in ocean sediments.

It sounds implausible: how can you keep a gas underground? Nevertheless there are reputable studies that say it is feasible, including one in 2005 from the Intergovernmental Panel on Climate Change, the body of scientists whose reports on climate change are the most authoritative—and increasingly urgent—warnings that global warming is real and dangerous.

Economics may be a bigger obstacle than engineering. Building power plants capable of capturing CO₂, let alone retrofitting old plants, is expensive. Storage takes the right kind of geology; Missouri’s porous karst topography would never hold CO₂ down. It would have to be piped somewhere else, and the pipeline would be pure, deadweight cost.

The only, limited market for CO₂ is in enhanced oil recovery—pumping the compressed gas into old oil fields to increase the pressure and bring more oil out of hiding. When your objective is to reduce GHG, that’s counterproductive. It will take a hefty tax on carbon before CCS becomes cost-competitive with funneling CO₂ into the open air for free.

Muttering the c-word

In all these Congressional bills and in most other plans being publicly floated, the emphasis is on technological solutions, most of which are unproven and expensive. The mood is less one of can-do optimism than of desperation. If we’re lucky, CCS will let us keep burning fossil fuels; if not, we’ll just have to hope that efficiency and renewables will give us the same kind of abundant and reliable energy supply. Economic growth and the precious high-consumption lifestyle are not negotiable.

What we’re not hearing is the c-word: conservation. Efficiency means doing the same job with less energy. Conservation means using less energy, period. Efficiency conserves up to a point, but if the job (or the whole economy) continues to grow it eventually takes more energy even if it’s done with maximum efficiency.

The International Energy Agency projects that world energy demand, given current trends, will double within 35 years. Can energy efficiency and renewable energy keep up with the pace of this accelerating treadmill?

Right now we’re only whispering the c-word. We should scream it: “**AMERICA, USE LESS ENERGY!**” 📖

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10 Reasons Why Your Donation is a GREAT Investment in Missouri!

Here are just a few accomplishments our donors and activities made possible by generous donations from Missouri Sierra Club (MSC) members and friends ...

- 1. Dirty Secrets Act.** In 2006 your Sierra Club lobbyists, with citizens across Missouri, defeated a bill that would allow industry to "self-fund" and avoid public disclosure and liability for toxic spills. (Back again in 2007)
- 2. Coal Cities campaigns.** MSC members are encouraging mayors to sign on to the Mayors Climate Protection Agreement. Clayton, Missouri, KC, Kirkswood, Maplewood, St. Louis Hills & Univ. City have all signed the agreement.
- 3. CAFO legislation.** In 2006 your MSC lobbyist led the state wide coalition to defeat legislation that would allow hundreds more industrial "hog" facilities into Missouri. (Back again in 2007)
- 4. Reorganized Group in Springfield.** The White River Group reorganized in 2005 and is engaging its members and the community in environmental issues.
- 5. Bike lanes included on road projects.** 1,000 bike-paths planned without bike lanes are being questioned in Kansas City (Paseo Bridge) & St. Louis (Hanley Road).
- 6. Stopping the Coal Rush in Missouri.** Your Missouri Sierra Club is challenging Missouri utilities to invest in cleaner, safer and cheaper solutions to meet the state's future energy needs.
- 7. Water Quality.** MSC continues to challenge the state's attempts to circumvent the Clean Water Act to benefit polluting industries. In 2005 we sued EPA to intervene when Missouri again failed to produce a complete "impaired water bodies" list.
- 8. Defending ROADLESS AREAS** in the Mark Twain National Forest (MTNF). MSC is appealing the new MTNF management plan. The plan has serious legal, biological, economic and social flaws.
- 9. Clean Water Commission.** Missouri Sierra Club recently challenged the Governor on his illegal commitments to the Clean Water Commission.
- 10. Sand & Gravel Mining.** Non-permitted and unregulated in-stream sand and gravel mining operations have caused devastating impacts on aquatic life in Missouri's most cherished Ozark streams. MSC opposes the weakening of current standards.



MISSOURI SIERRA CLUB
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MISSOURI SIERRA CLUB
Protecting Missouri communities with grassroots activism, public education, lobbying, and public interest litigation.

1. Factory Farm Pollution— hogs.

Missouri now ranks 49th in dollars spent on environmental protection.

2. Opposing coal-burning power plants with smart energy solutions for our long-term energy future.

3. Protecting Mo. water & air from Factory Farm Pollution— poultry.

4. Protecting the Ozarks National Scenic Riverways and other Mo. waters: in-stream silt and gravel mining; lead mining, etc.

5. Missouri River flood plain protection: opposing 2-142 1300-year levy — the largest ever proposed.

6. Lead contamination & Doe Run Co: stopped recent attempt to rehabilitate lead contaminated sources, apply pressure for lead cleanup throughout the region and in the Mississippi River.

7. Working for habitat & flood plain restoration along the Mississippi.

8. LEGISLATIVE WATCHDOG!
 Rallying citizens to hold legislators accountable — fighting attempts to eliminate, weaken or sidestep environmental safeguards.

9. Safeguarding Mo's forests and wild places for future generations: sale of public lands; lead mining.

One of the strongest tools that we, as citizens, have to protect Missouri's environmental future.

Recycling . . . Where Does It Go?

by Colleen Sullivan

Recycling has changed a lot in the past few years. My recycle bin has gone from a small 2' x 3' plastic bin to a 50 gallon trash can with more volume than my can for "other" waste. What has changed? Eureka, Missouri, residents and many others who are serviced by IESI, Allied, Waste Management, Veolia and other independent haulers may no longer be limited to newspapers, cans and soda bottles. These haulers have the capability to offer single stream recycling which allows cans, glass bottles, aluminum trays and foil; plastics of all types (except #6); magazines, newspapers, junk mail, cardboard, pizza boxes and even waxed milk and juice cartons to be tossed into a single bin. Simply empty and rinse all containers.

It seems pretty simple—and it is. If it is paper and can be torn, it can probably be recycled. If it is a plastic container and is not stamped with #6, it can probably be recycled. Please do NOT recycle hazardous chemical containers such as motor oil, insecticide or herbicide; no Styrofoam coffee cups, plates or clear polystyrene #6; no plastic films such as cling wrap or bags from potato chips, cake mix and cereal. Please return plastic grocery bags to the store for recycling.

IESI along with the other haulers noted above bring their recyclables to a materials recovery facility called Resource Management Company. I had the opportunity to tour Resource Management along with the Sierra Club this January to see where my commingled recyclables go. Somehow I had expected a dirty and smelly operation, and was sur-

prised to find a large, open and rather clean facility in Earth City. It looks like any other new building on the outside and houses 72,000 square feet of operating space. The process is a sophisticated and proprietary system of shakers, ramps, eddy currents, blowers and quality control linesmen that has been engineered and refined over the last seven years. The shakers remove the glass and then the paper, metals, and plastics are filtered out. According to Gary Gilliam, Resource Management's sales manager, "This system has revolutionized the industry for us and our haulers. Not only can we sort more materials, but hauling trucks can now 'compact' their recycle loads which means they can pick up more on a single run." This is also significant because special fleets of recycle trucks are no longer needed.

The sorted paper is bailed and sold to make other paper products. The glass is pulverized into sand for new bottles, pea gravel or fiberglass insulation. The aluminum, tin and steel are sold for re-fabrication. The remaining plastics are palletized and shipped to Resource Management's Chicago facility where a state-of-the-art optical scanner reads each piece of plastic and sorts it by recycle number, size, weight and color. Beverage bottles #1 are remanufactured into products like carpet. In fact, approximately 50 percent of carpeting is now made from recycled bottles. Containers with #2, milk and juice jugs, along with detergent and shampoo bottles are extruded into pellets to create plastic decking and a wide variety of other materials.

"Creating a second life for these items is all

about economics," said Gary. Buyers have a reduced cost of materials which allows them to be more competitive. In addition to saving natural resources, recycling saves energy, reduces air and water pollution, and reduces greenhouse gas emissions. According to the statistics for 2006, Eureka residents diverted 520 tons from the landfill which is an average of 11.3 pounds per person per month!

What about people who do not have curbside recycling or are unsure if their hauler offers single stream? Good question. If your community does not offer curbside pick up, you can take recyclables to a variety of centers that are listed on the St Louis-Jefferson Solid Waste Management District website: www.swmd.net. If you do have curbside recycling and are not sure if it is single stream, call your hauling company or contact your city government. Single stream recycling is expanding rapidly.

Recycling—especially single stream is an easy thing to do, but it still requires changing habits which is hard. If you are already a recycler, challenge yourself to divert at least half your trash into the recycle bin. If you are new to recycling, set a small can next to your kitchen trash for paper, cans, glass and plastic. Choose to buy items such as eggs in cardboard instead of Styrofoam—containers that are or can be recycled. For those in business, especially in the food industry, set guidelines for responsible purchasing and handling of materials—particularly #6 which cannot be recycled which means it goes to landfills or gets shipped overseas. Last but not least, take pride in your efforts small and large because your choices and actions do make a difference.

Thank you! 🙏

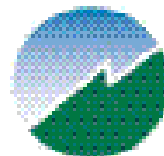
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WE ARE LOOKING FOR PEOPLE WHO CARE ABOUT OUR RIVERS!

JOIN US AT THE JACKS FORK RIVER FOR:

The ninth annual Jacks Fork River cleanup and canoe give-away*.
Saturday- June 2, 2007

LOCATIONS FOR CLEANUP

Hwy. *Y* to Buck Hollow at Hwy 17
Buck Hollow to Blue Springs
Blue Springs to Rymers Landing
Rymers Landing to Bay Creek
Bay Creek to Alley Campground
Alley Campground to Hwy 19 Eminence Bridge
Eminence Bridge to Two Rivers
Or you may cleanup a put-in/take out area as listed above

For more information call:
Ted or Pat Haviland 417-932-4363
jacksforkst713@hotmail.com

Groups are responsible for their own river transportation.

Canoe available for rent at local liveries call for information on Stream Team discounts.

Registration and sign-up time **8:00-9:00 am-June 2** at your chosen location.

A Bar-B-Q supper will be served to all participants at Eminence pavilion at 6:00 pm. Drawing for canoes and other prizes to follow supper.

You must be present to win!!

We have a group campground reserved for June 1st & 2nd at Alley Springs- Group campsite #3. Group sites *cannot* accommodate recreational vehicles. There are no electrical or water hook-ups at group sites. The camping is free for clean-up volunteers.

You and I can be proud

that we are part of an amazing network of volunteers, activists and donors—citizens combining their resources to hold polluters accountable and effect positive policy changes for the long-term health and safety of Missouri communities. Please give generously so that your Missouri Sierra Club has the resources in 2007 to utilize every lawful means of defending the environment, including grassroots organizing, public interest litigation and effective lobbying. **And thank you for all that you do!**

Thank you for your trust and support!

My contribution level is:

- Guardian** \$1,000+
- Protector** \$500 - \$999
- Steward** \$100 - \$499
- Advocate** \$50 - \$99
- Other**

Payment method:

- Check enclosed Amount \$ _____
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*Contribution - payable to: **

- Missouri Sierra Club (not tax deductible)
- Sierra Club Foundation, Missouri Chapter

Address _____
City _____ State _____ Zip _____
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- Please send me information on how to plan a request that we will a living trust
- I am specifically interested in supporting Missouri Sierra Club (with a planned gift)
- Please do not publish my name as a donor

* Contributions or gifts to "Missouri Sierra Club" are not tax deductible; they support our effective citizen-based advocacy and lobbying efforts in Missouri. This type of gift is preferred as it provides maximum flexibility for our work in Missouri.

* Contributions or gifts to "The Sierra Club Foundation, Missouri Chapter" are tax-deductible as charitable contributions as they support grants for public education, research and public interest litigation to further the Club's goals in Missouri.

✓ On line donations: <http://missouri.sierraclub.org/>
Only non-tax deductible donations are available on-line

My Voice/My Time

I want to help the Missouri Sierra Club speak out for Missouri's environment.

Send me

- The Green Report (legislative update)
 - Email
 - Register only
- Legislative Action Alerts
 - Email

I want to volunteer to

- Contact my legislator regularly
- Write letters to the editor
- Plan events
- Write for the newsletter or website (write to)
- Help w/ website design (technical)
- Host a fundraising party/event
- Make phone calls
- Other _____

Newsletter survey (circle your answers):

1. Do you regularly read the newsletter—Ozark Sierran? Yes No
 2. Would you convert to an electronic newsletter if available? Yes No
- Newsletter comments:

Please tell us of the environmental issues of most concern to you:



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573-815-9250
www.missouri.sierraclub.org

Outings Continued

claus@missouri.sierraclub.org

May 5 (Sat)—Compass class at Loose Park Kansas City, MO. Learn the basics of using a compass. We will locate Champion Trees, Civil War markers, fountains, etc. in one of the most beautiful parks in the city. \$5 donation requested. Eileen McManus, (816) 523-7823, eileenm@planetkc.com

May 5–6 (Sat–Sun)—Canoe Trip, Buffalo National River, AR. We'll float one of the most scenic rivers in the U.S. Terry DeFrates (913) 385-7374, theerustbucket@aol.com

May 18–20 (Fri–Sun)—Family Campout in the Flint Hills. We'll stay at the YMCA's scenic Camp Wood in Elmdale, where your choice of accommodations range from your own tent to a well-appointed cabin. A day trip to the nearby Tallgrass Prairie National

Preserve will be a great opportunity to explore and learn about the region's fascinating history and prairie ecosystem. Sign up early so we can arrange accommodations. \$10 donation requested. Renee Andriani, (913) 488-4445, randri@kc.rr.com

May 20 (Sun)—Sunday Stroll at Lakeside Nature Center, Kansas City, MO. Meet us at 2 p.m. at Lakeside Nature Center in Swope Park for a short Sunday stroll through its exhibits and grounds. Steve Hassler, (913) 707-3296, steve.hassler@kansas.sierraclub.org

June 2 (Sat)—Tour, hike and picnic at Lakeside Nature Center in Swope Park, Kansas City, MO. Come see displays of Missouri native wildlife, hike the 2 1/2 mile Fox Hollow Trail and relax afterwards at a picnic at a nearby shelter. Eileen McManus, (816) 523-7823, eileenm@planetkc.com

June 16 (Sat)—Day Hiking, Parkville, MO. Parkville has two great walking venues: the English Landing trail along the Missouri River and the Nature Sanctuary. We'll do one or both on a lovely day in May. \$5 donation requested. Anne McDonald (913) 384-6645 pamcdonald@kc.rr.com

July 7 (Sat)—Day Hiking at Weston Bend State Park, Weston, MO. Join us as we take in some of the scenery along the Missouri River bluffs. \$5 donation requested. David Anderson (816) 678-4359 david.anderson@missouri.sierraclub.org

Trail of Tears Group

None submitted.

White River Group

None submitted.

KCP&L Agreement.....continued from page 1

entirety of the utility's service area within six months.

- The company will work with the Sierra Club on legislative and/or regulatory measures in Kansas and Missouri as part of their effort to achieve a 20 percent system-wide reduction in the utility's CO₂ emissions.
- The Sierra Club will participate in a study with KCP&L to determine the future of their aging Montrose generating station located southeast of Kansas City. The study will look at the possibility of retiring, altering, or repowering three units at the Montrose site.
- The company agreed to a six figure investment in global warming reduction, pollution monitoring projects, and infrastructure upgrades in the utility's main metropolitan service area. The projects will be selected jointly by the utility, the Sierra Club, and Concerned Citizens of Platte County. ☞

Statement made on behalf of Missouri Sierra Club by Melissa Hope at the joint press conference in Kansas City with Concerned Citizens of Platte County and KCP&L on March 21st, 2007.

Today, we may have turned the corner for dealing effectively with climate change in the U.S.

What we have achieved here serves as a model for citizens, environmental groups and businesses working together to address environmental concerns.

We would like to applaud and congratulate KCP&L for raising the bar; for leading this community, its peers in the industry, and perhaps the entire U.S. in addressing climate change.

This groundbreaking agreement offsets 100 percent of the 6,000,000 tons/year of carbon emissions from the new plant. KCP&L has made a huge commitment to utilize Smart Energy Solutions to meet future energy demand.

Sierra Club looks forward to working with KCP&L to help the Midwest realize its potential as a clean energy leader.

Part of the agreement provides funds for Kansas City's Climate Protection Initiative. I would like to call on all communities in the region to begin their own Climate Protection Initiatives.

Finally, I would like to thank everyone throughout the community that helped us get to this place today—there have been hundreds of volunteers involved in this campaign over the last several years. I especially want to thank Susan Brown and Concerned Citizens of Platte County for their tireless efforts.

Staff and Office in the 21st Century

by Jim Turner, Chapter Chair

When Carla Klein left to become director of the Wisconsin Chapter and Therese Folsom took a different job within the Club, our Executive Committee discussed whether the Columbia office was still useful.

One of our chapter's critical needs is to have a staff member available throughout the year to closely monitor state regulatory agencies and lobby the legislature in Jefferson City. Doing this from the Columbia office meant travel expenses. The Columbia office also lacked space for meetings and was not accessible to disabled visitors. So we'll think toward opening an office in Jefferson City, when our chapter treasury level permits, to coordinate our volunteer activists in our attention to Missouri government.

To free up funds for hiring another full-time staff member, we'll economize on office expenses. Using mail, phone and fax in the office of the Eastern Missouri Group in Maplewood, our clerical staff will forward information and materials to our fund-raising Development Associate Melissa Hope, our lobbyist Roy Hengerson, and to volunteer activists engaged in specific campaigns such as energy and forestry. Through phones, emails, and bimonthly meetings, our volunteers will continue to maintain our chapter's culture and environmental campaigns. ☞

NATURE'S BLOG

A log of natural events, natural history and nature-based philosophy

by Robert Folzentogen

www.naturesblog.blogspot.com

Outings Continued

park. This will be a leisurely walk with time to enjoy the sights & sounds along the way. Bob Herndon, (314) 961-4811.

May 4 (Fri) Shaw Nature Reserve should be in full spring bloom. Join us to see on our 6 to 8-mile journey. Suzanne Smith, (618) 281-4762.

May 5–6 (Sat–Sun) Buffalo River—Ponca Arkansas. The Buffalo is one of the premiere rivers in the nation. The river gorge is much deeper than any we have in Missouri. We will be car camping, staying at Lost Valley Restoration Area. There may be side hikes to Eden Rock Cave and to Hidden Valley Falls, which is a waterfall that emerges from a hanging valley and drops into a box canyon. Marion Evens may volunteer to make breakfast for the group. Saturday night, we will go into the town of Jasper for dinner and possibly a show. Colin Maag (314) 721-7397, colinmaag@sbcglobal.net

May 6 (Sun) Beginner and intermediate canoe clinic. No experience needed. All that is required is a desire to improve your canoeing skills. Equipment provided for tandem instruction. Intermediate solo canoe instruction will be offered depending on interest shown. Must provide own solo canoe. George Behrens, (314) 821-0247, or Diane Albright, (314) 729-7629.

May 11 (Fri) It is azalea time at Hawn State Park on the 10-mile wilderness loop. Suzanne Smith, (618) 281-4762.

May 12 (Sat) Highway cleanup. We'll keep our eyes open for wild strawberries and fawns hiding in the grass. Diane DuBois, (314) 721-0594.

May 12 (Sat) Huzzah Creek—We will put in at Red Bluff and take out 10 miles downstream at Harper's Ferry. This is above where the outfitters usually run. There may be some low water bridges and a tree or two to portage around. Some quick turns may be required depending on water level. Colin Maag, (314) 721-7397, colinmaag@sbcglobal.net

May 18 (Fri) We will explore Cuivre River State Park. Always a challenge. Suzanne Smith, (618) 281-4762.

May 20 (Sun) Castor River Shut-Ins. See April 28 description above. Bob Herndon, (314) 961-4811.

May 26 (Sat) Mineral Fork—There may be some trees and low water dams to portage over. The stream is small and intimate with quite a few twists and turns. Colin Maag (314) 721-7397, colinmaag@sbcglobal.net

May 26 (Sat) Silver Mines Recreation Area/Millstream Gardens Shut-ins are a unique example of the result of millions of years of erosion creating picturesque wonders of nature. Carving a channel through granite layers, the St Francis River created a multiplicity of boulders of many shapes and sizes. Combining the historic with the natural makes the shut-ins of Silver Mines

especially interesting. We will walk about two miles of the trail overlooking the shut-ins along the St. Francis River. We will also hike a portion of the trail at Mill Stream Gardens. We will picnic by the river. The trail surface is moderate with considerable elevation. Exploring opportunities exist for the more adventuresome. The drive is 1 1/2 hours to the park. This will be a leisurely walk with time to enjoy the sights & sounds along the way. Bob Herndon, (314) 961-4811.

May 27 (Sun) One day canoe/kayak trip in the Meramec basin. We will try to catch a section of the river that is less crowded. Canoe rentals not available. Toni Armstrong & Richard Spener, (314) 434-2072

June 1 (Fri) Call for info on our eight-mile hike. Might be Buford Mountain, steep and rocky about 10 miles. Suzanne Smith, (618) 281-4762.

June 2 (Sat) A small stream with canoe rentals available. Possibly the Courtois, Mineral Fork or Big Creek if there is enough water. Jonathan Lehmann, cell (314) 791-3969.

June 2 (Sat) Hike to Valley View Glades. We will take the trail to get a closer look at the many wildflowers in the glades. Hot weather conditions and cross country travel may occur. Please plan accordingly. Paul Stupperich, (314) 429-4352, lonebuffalo@earthlink.net

June 3 (Sun) Canoe Float down the Meramec/Explore Green Cave. Utilizing the Meramec State Park Canoe Rental, We will float from Sappington Bridge down to the boat ramp. We'll stop and explore Green Cave on the way down the river. The charge is \$37 per canoe for the canoe rental and transportation. Payment must be made in advance. Bob Herndon, (314) 961-4811.

June 8 (Fri) Back to Shaw Nature Reserve for a new batch of wildflowers on our seven-mile hike. Suzanne Smith, (618) 281-4762.

June 10 (Sun) Inner tubing on the Meramec. Enjoy the best of many worlds! On a hot summer day take a cool hike and tubing float. We will start at a picnic table in La Jolla Park (Meramec Caverns), blow the tubes up and plop our hot bods on the tubes in the cool water. We'll paddle (with the power and control of special tubing paddles), walk on gravel bars and wade upstream as we explore the Meramec river from Meramec Caverns. We will leisurely float back down the meandering river through an excellent tubing run and under the 200-foot high bluffs over Meramec caverns. Several options are available depending on the river level. Bob Herndon, (314) 961-4811.

June 15 (Fri) We probably will hike to a southern destination within two hours of St. Louis. Suzanne Smith, (618) 281-4762.

June 16 (Sat) Inner tubing on the Meramec. See description above for June 10. Bob Herndon (314) 961-4811.

June 24 (Sun) Inner tubing on the Meramec. See description above for June 10. Bob Herndon, (314) 961-4811.

June 29 (Fri) If it is not too hot we will hike the eight-mile Lewis Trail at Weldon Springs. Suzanne Smith, (618) 281-4762.

Osage Group

April 4–May ?? (Wed) Wildflower Walks. Join Randal Clark for his annual Spring Wildflower Walks. Learn about wildflower identification while taking a walk on the wild side. Dinner after the hike at a local restaurant. Meet each Wednesday at 5:30 p.m. at the Devil's Icebox parking lot of Rock Bridge Memorial State Park. Randal Clark, (573) 875-0514.

April 14 (Sat) Clean Up Columbia Day. Help us keep our city clean at the 11th annual cleanup. Lunch is included. Contact Greg Leonard, (573) 443-8263, greg.leonard@missouri.sierraclub.org

April 28 (Sat) Bike Ride. We will start the ride at Cooper's Landing on the Katy Trail, ride out for several miles, and then return for dinner at the Thai restaurant. Contact Greg Leonard, (573) 443-8263, greg.leonard@missouri.sierraclub.org.

Thomas Hart Benton Group

<http://missouri.sierraclub.org/thb/outings>

April 14–15 (Sat–Sun)—Car Camping Tuttle Creek State Park, Manhattan, KS. Spring is a great time to be on the prairie and we can enjoy it on a hike through the Konza Prairie on Saturday as part of our car camping excursion to Tuttle Creek State Park just north of Manhattan KS. \$10 donation requested. Anne McDonald (913) 384-6645 pamcdonald@kc.rr.com

April 26–29 (Thu–Sun)—Car Camping, Mountain View, AR. Join us for our fourth annual trip to Blanchard Springs Recreation Area and the Ozark Folk Center State Park. Deadline for signup on this trip is April 19. \$10 donation requested. Dave or Kathy Patton (816) 461-6091 dave.patton@missouri.sierraclub.org

April 29 (Sun)—Outdoor Photography Outing at Loose Park, Kansas City, MO. Bring your camera (digital or film) along with a tripod if you have one for this outing. No previous experience needed. There will be a brief introduction to outdoor photography and hike to look for photo opportunities. Please RSVP. Limit 10 participants. \$5 donation requested. Claus (816) 517-5244 (please call before 8 p.m.) claus@missouri.sierraclub.org

May 4 (Fri)—Evening Walk in the Crossroads Arts District, Kansas City, MO. Join us for a fun evening in Kansas City's cross roads art district as we walk from art gallery to art gallery. Claus (816) 517-5244 (please call before 8 p.m.)

SIERRA CLUB OUTINGS OZARK CHAPTER

Eastern Missouri Group

<http://missouri.sierraclub.org/emg/outings.aspx>

Eastern Missouri Group outings cost one dollar and are open to the public. Leaders are unpaid volunteers who need your cooperation to make the trip safe, pleasant and rewarding. Please call the leader well in advance for details, approval, or if you plan to cancel. Outings start officially at the trailhead or river access. Travel responsibility rests on each participant. Car-pooling is encouraged but leaders cannot be responsible for its organization. The Sierra Club does not provide insurance for transportation. Participants sign a liability release form and reimburse drivers for expenses. Be adequately equipped and prepared. No guns, pets, or radios are permitted on trips. Please leave the area cleaner than you find it. For additional outings submitted after our publication deadline and for changes, please check the Eastern Missouri Group website at <http://missouri.sierraclub.org/emg>.

April 7 (Sat) Washington State Park. This is a very diverse park with Indian petroglyphs (rock carvings from 1000 A.D.-1600 A.D.), large bluffs, glade areas, The Big River and a wildflower valley. The primary trail is a 1/2 mile FLAT EASY trail through the most spectacular, natural wildflower area in this part of the country. At the peak it is a carpet at least 50 foot wide by 1/2 mile long of blue-eyed Marys, celandine poppies, Virginia bluebells, trillium, Miami mist and many others. The petroglyphs are a few hundred feet from the parking lot on paved walkways. The history and origin is explained at the entrance. We will also hike the Thousand Step trail (optional) which is about 1.5 mi, moderately difficult steep climb along the bluffs and by a gazebo overlooking the Big River valley. Several woodland wildflowers can be seen on this trail. Other options are available for anyone not wishing to take this hike. This will be a leisurely walk with time to enjoy the sights & sounds along the way. Bob Herndon, (314) 961-4811.

April 8 (Sun) Pickle Springs Natural Area. This unique natural area is a part of the La Motte sandstone complex of Ste. Genevieve County. La Motte sandstone is the oldest sedimentary rock in Missouri. This is a two-mile, moderately difficult trail (with rough trail surfaces and considerable elevation) that takes you by many unique formations with such intriguing names as The Keyhole, Cauliflower Rocks,

In order to participate on one of the Sierra Club's outings, you will need to sign a liability waiver. If you would like to read a copy of the waiver prior to the outing, please see <http://www.sierraclub.org/outings/chapter/forms/> or call (415) 977-5630.

In the interests of facilitating the logistics of some outings, it is customary that participants make carpooling arrangements. The Sierra Club does not have insurance for carpooling arrangements and assumes no liability for them. Carpooling, ride sharing or anything similar is strictly a private arrangement among the participants. Participants assume the risks associated with this travel.

The Slot, The Double Arch and more. Other features include numerous small springs (including Pickle Springs), massive bluffs (Dome Rock and Owls Den Bluff), box canyons (Rockpile Canyon and Spirit Canyon), waterfalls (Mossy Falls and Headwall Falls), and a glade (Piney Glade). Because of the variations in elevation (About 200 feet) several plant communities are evident along the trail producing a variety of spring wildflowers. We will relax on Dome Rock for lunch and enjoy the view. We will have the option of stopping for dinner on the way back. This is a 1.5 hr drive. This will be a leisurely walk with time to enjoy the sights & sounds along the way. Bob Herndon, (314) 961-4811.

April 11 (Wed) Looking for Bluebells at St. Francois State Park, about six miles at moderate pace. Margot Kindley, (636) 458-4063, margot107@prodigy.net

April 13 (Fri) Annual hike in Southern Illinois. Maybe Little Grand Canyon or Giant City State Park. About 6-8 miles total. Giant City has great wildflowers and many trails. Suzanne Smith, (618) 281-4762.

April 14 (Sat) Big Creek—Sam A. Baker State Park. We will put in at Des Arc and take out at the park for a total of 10 miles. Three quarters of the way through there are some shut-ins that add a little challenge. The shut in would rate a class II. As we paddle into the park, the red granite bluffs are some of the prettiest in the state. If the lodge is open, we will have dinner before heading home. Leader: Colin Maag, phone (314) 721-7397 email: colinmaag@sbcglobal.net

April 14-15 (Sat-Sun) Day hike in the canyon country of Southern Illinois. Our route through spectacular Jackson Hollow will follow the base of imposing, sixty-foot high sandstone cliffs, wind through building size boulders and past hundred-year old beech trees. This is a fairly strenuous seven-mile hike for experienced hikers. Camping will be in a primitive Shawnee Forest campground. Limit eight. Hiking boots required. Terry Allen, (618) 398-1087 or Suzanne Smith (618) 281-4762 (after 7:30 p.m., weeknights only).

April 14-15 (Sat-Sun) Overnight Trip to Ferne Clyffe & Giant City State Parks. We will explore some of the majestic wonders of Southern Illinois with this overnight, two day trip to Marion, Ill. We will rent rooms at Motel 6 in Marion for Sat. night. From there we will go to Ferne Clyffe State Park on Sat. and to Giant City on Sun. While we will explore several trails among the spectacular rock formations of the two parks, the primary focus of this trip is the Trillium Trail at Giant City and the Round Bluff

Nature Trail at Ferne Clyffe. At this time of the year, the trails feature a wide variety of spring wildflowers including white trillium, blue-eyed Marys, sand phlox, May apples, jack-in-the-pulpit, fire pink and many others. The trails are moderately rough with considerable elevation. Marion is a two hour drive and the parks are each about 1/2 hour further. Each day's hike will be 3-5 mi. This will be a leisurely walk with time to enjoy the sights & sounds along the way. Bob Herndon, (314) 961-4811.

April 15 (Sun) Day hike St Francis Park. We will hike the Swimming Deer Trail for a view of Big Creek and then go cross country to hunt for the elusive Table Rock. Paul Stupperich (314) 429-4352 or lonebuffalo@earthlink.net Bob Gestel (636) 296-8975 or rgestel@sbcglobal.net

April 20 (Fri) Spring wildflower hike approx. 8 mile. Tentative Washington STATE PARK for the blue-eyed Marys and other great flowers. Suzanne Smith, (618) 281-4762.

April 21 (Sat) Al Foster Trail & Glencoe Bluffs. We will explore one of the most prolific wild flower valleys and one of the more unique bluffs around St Louis. The valley is carpeted with billions of blue-eyed Mary's, Virginia blue bells, etc. The bluffs provide a unique view of the Meramec Valley all the way to I-44. The area has an interesting history as it has withstood the ravages of civilization for many years including Majestic Material Corp., Simpson Sand & Gravel, and the Robinson Group each contributing to it's present state. This will be a leisurely walk with time to enjoy the sights & sounds along the way. Bob Herndon, (314) 961-4811.

April 21-22 (Sat-Sun) Trail maintenance on the Ozark Trail in the Pioneer Forest. Our last trail maintenance outing until fall so let's have a great turn out. We will have a party Saturday night and a day hike on Sunday. Paul Stupperich (314) 429-4352 or lonebuffalo@earthlink.net Bob Gestel (636) 296-8975 or rgestel@sbcglobal.net

April 22 (Sun) Earth Day celebration at the main lower level entrance to the Muny Opera in Forest Park. Please volunteer for a few hours with fellow Sierrans in a lemonade booth or an exhibit booth. 10 a.m. to 6 p.m. Please call the office, (314) 644-0890, or Jim Young, (314) 664-9392.

April 28 (Sat) Castor River Shut-Ins. Shut-ins are a unique example of the result of millions of years of erosion creating picturesque wonders of nature. Carving a channel through granite layers, the Castor River created a multiplicity of boulders of many shapes and sizes. We will picnic by the river and explore the trail among the shut-ins and along the river. The trail surface is moderate with some elevation. Considerable opportunity exists for the more adventuresome. The drive is 1 1/2 hours to the