

Missouri Sierran

One Earth

One Chance

APRIL - JUNE 2008

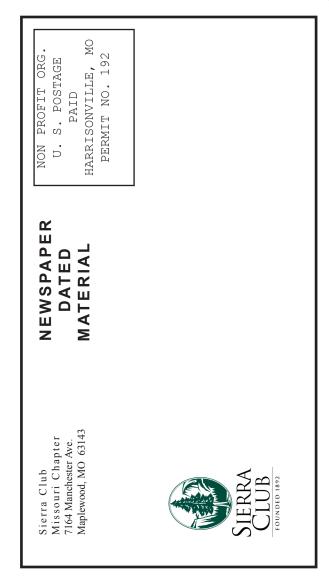
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AECI Abandons Proposed Coal Power Plant in Favor of Clean Energy

By Henry Robertson and Melissa Hope

More information at mocleanenergy.org.

On March 3rd, Associated Electric Cooperative, Inc. (AECI) announced that it was shelving or "postponing indefinitely" its plans to build a massive 660 megawatt coal-burning power plant in Norborne, 60 miles east of Kansas City.



The announcement is the latest breaking news in a tidal wave of progress as our nation transitions from nineteenth century coal technology to a modern and clean 21st century clean energy economy. Four-years ago the country was considering plans to build as many as 160 new coal-fired power plants and today AECI brings the total number of plants abandoned or defeated to 63. And all indications are that this trend is accelerating as costs of coal skyrocket and the nation focuses its attention on global warming solutions.

AECI is owned by, and provides wholesale power to, six regional and 51 local electric cooperative systems in Missouri, northeast Oklahoma and southeast Iowa that serve more than 850,000 customers. In the past two-years Associated Electric has become the wind energy leader in Missouri among all electric providers, including municipal and investor owned utilities.

The Sierra Club (Missouri Sierra Club in conjunction with Sierra Club's National Coal Campaign) has been working with Concerned Citizens of Carroll County and a growing Missouri Clean Energy Coalition to educate residents about the dangers of coal and to advocate for Missouri's Clean Energy Future heralded this announcement.

AECI's decision was unusual considering that they had just a few weeks earlier received a construction permit from the Missouri Department of Natural Resources' Air Pollution Control Program. But the plant still faced many obstacles. The project still needed a water certification from MDNR, a dredge-andfill permit from the U.S. Army Corps of Engineers, and a solid waste permit from MDNR for its coal ash landfill. The Sierra Club was prepared to challenge all these permits and to file a federal lawsuit attacking the plant for its contribution to global warming.

AECI's biggest challenge was financing. As a rural electric coop, AECI was eligible for loans under an anachronistic federal program. The Rural Utilities Service (RUS), a unit of the Department of Agriculture, has been lending money for rural electrification since 1935, even though the rural U.S. is now fully electrified and the biggest demand for new



For the latest updates, visit us on the web: http://missouri.sierraclub.org

electricity from coops like AECI is in areas of suburban sprawl. The RUS has now suspended all lending for new coal plants. California Congressman Henry Waxman sent a letter to RUS in January querying how it could justify such loans in the face of climate disruption for which coal-fired power plants are the single biggest culprit.

Private financing is virtually out of the question. Three of the country's biggest investment banks, JPMorgan Chase, Citi, and Morgan Stanley, reached agreement on a set of Carbon Principles and an Enhanced Diligence process for review of proposed coal plants in the light of climate risk. Coal does not look like a smart investment anymore. Congress is almost certain to enact legislation that will penalize coal burning and start ratcheting down the country's overconsumption of fossil fuels.

The shelving of the latest coal plant is very good news but we still have many challenges ahead before we can determine what Missouri's energy future will look like. Kansas City Power & Light warns of substantial cost overruns at its Iatan-2 plant being built in Platte County. After that unit comes on line, coal will have run its course in Missouri, at least for the time being. AmerenUE's long-range plan, released February 5th, makes clear what some of us already suspected - they're looking to nuclear for the future. Some environmentalists prefer nuclear to coal on global warming grounds, but (not to mention the unsolved problem of radioactive waste) the enormous expense of nuclear plants would displace investment from the far better options of energy conservation, efficiency and renewable energy.

Chapter Develops R Missouri Global Warming P Plan

By Henry Robertson

hat does Missouri's energy future look like? The setbacks to coal, such as those described in page-one article on AECI, are welcome news, but also a challenge. We've long dreamed of a clean energy future. Now the time is at hand to make those dreams materialize.

The Missouri Chapter is working on a comprehensive energy plan to tackle global warming. Our aims are to show the consequences of a "business as usual" approach to energy, to quantify as best we can the potential for efficiency and renewables to meet our needs, and to describe the policies Missouri will need to pursue. The members of the task force writing the plan are Chapter Development Director Melissa Hope, and a subcommittee of the Chapter Executive Committee consisting of Claus Wawrzinek, Gloria Sennert, Rick Haeseler, and myself.

The plan looks at present trends in energy use, including the transportation sector and sprawling development, and the effects global warming is likely to have in Missouri. We recommend solutions that can be taken by the state, local governments, and individuals. They include conservation (not using fossil energy whenever possible); energy efficiency in buildings, appliances and electricity use generally; smart growth and alternatives to the automobile; and renewable energy sources, especially wind, solar, and biomass. We will assess the limitations on using biomass for electricity generation and vehicle fuels, and debunk the claims of the corn ethanol boosters.

We hope that our Missouri Global Warming Plan will lay a solid foundation for our work in the future and serve as a guide to citizens and public officials. Meanwhile, the first Missouri wind farms are operational in the northwestern part of the state. Nearly all their output is being bought by Associated Electric Cooperative Inc, the same utility that "postponed indefinitely" the coal plant in Norborne, Missouri. Smart move. They can turn it around, and so can the state as a whole.

Also, Kansas City Power and Light has introduced energy efficiency legislation in the Missouri legislator that will provide an incentive to utilities to develop efficiency programs to reduce energy demand. Other promising energy legislation has also been introduced.

Renewable Energy Petition

Petitions are now circulating to get a Renewable Energy Standard on the Missouri ballot in November. Over 100,000 signatures must be turned in by May 4th. To learn more, visit www.renewmo.org. Help is needed — financial contributions and volunteers to collect signatures.

The Renewable Energy Standard (RES) would require Missouri's investor-owned utilities (AmerenUE, KCPL, Aquila and Empire District Electric) to provide electricity from renewable sources like wind, solar, small hydro and biomass. The amount of clean power required would increase by steps, going up to 15% in 2020. Similar standards, sometimes called renewable portfolio standards, already exist in 24 states. Experience has been that they have little discernible impact on customers' bills, but just in case, Renew Missouri built in a guarantee that this standard will not increase rates by more than 1%.

Missouri would become the third state to enact an RES by ballot initiative, after Colorado and Washington. The push for an initiative grew out of the 2006 Environmental Summit hosted by Missouri Votes Conservation. The Sierra Club and many other environmental organizations were frustrated by the legislature's failure to act. In 2007 the General Assembly did pass what we derisively refer to as "Renewable Energy Suggestions," asking the utilities to make a "good faith effort" to reach 11%. We need and deserve better than that.

Renew Missouri recently incorporated to manage the petition drive.



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Ginger Harris, Acting Chapter Chair gingerharris@charter.net, (314) 994-7106 Ginger Harris, Vice Chair gingerharris@charter.net, (314) 994-7106 Robert Zeller, Secretary, rzeller@semo.edu, (573) 334-9965 Cheryl Hammond, Treasurer info@todaydata.com, (314) 210-4054 **Byron Combs** byroncom@sbcglobal.net, (816) 587-9363 Leslie Lihou leslielihou@brick.net, (314) 726-2140 **Henry Robertson** hrbtsn@aol.com, (314) 647-5603 James Turner jasturner@socket.net, (660) 665-6256 **Becky Denney** dardenne@charter.net, (314) 645-3394 **Chris Burnnete** chrisburnette@earthlink.net, (314) 645-3394 Eastern Missouri Group: Rick Haeseler, rhinoric@hotmail.com

Osage Group: Vacant Thomas Hart Benton Group: Claus Wawrzinek claus@missouri.sierraclub.org, (816) 517-5244 Trail of Tears Group: Bob Zeller rzeller@semo.edu, (573) 334-9965 White River Group: Cynthia Andre csandre1@aol.com, (417) 581-8318

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Staff

7164 Manchester Avenue, Maplewood, MO 63143 (314) 644-1011 or Toll Free (800) 628–5333 **Melissa Hope**, *Development Director*, melissa.hope@sierraclub.org, **Roy Hengerson**, *Legislative Director*, roy.hengerson@sierraclub.org, **Sue King**, Chapter Finance sue.king55@yahoo.com

Demand paper ballots for all elections in 2008

by Ginger Harris

The National Sierra Club funded two temporary, part-time staff positions in Missouri to encourage voters to support a campaign finance reform measure on the November 2000 ballot. Why?... because the Club recognized that as long as big campaign contributions continued to control who got elected to office and who got appointed to state regulatory commissions, the Sierra Club would have difficulty achieving environmental protections and sustainability goals.

In 2000, controversy over "hanging chads" gave the U.S. Supreme Court an excuse for stopping further re-counting of votes in Florida, handing victory to the candidate who had lost the popular vote. The controversy also gave voting machine vendors an opportunity to write and lobby for enactment of the Help America Vote Act (HAVA), which mandated that by 2004 (later extended to 2006), election officials throughout the country would have to provide a way for disabled voters to cast their ballot in private. HAVA provided almost four billion dollars to purchase new voting equipment for all jurisdictions. Though HAVA didn't specifically require touch-screen vote-counting machines (DREs) for disabled voters, voting machine vendors rushed production of hackable DREs (using proprietary software and initially no paper trails), and convinced some states to buy these for all their voters.

The vendors also revised widely used optical scanners for use by "abled" voters and notified local election officials that they would no longer support currently used equipment (e.g. punchcards).

Thus, even jurisdictions that did not need new equipment ended up buying it. What were the consequences for the Sierra Club?

All our hard work for candidates or issues may have been for naught, because wherever the new machines were used, we cannot be sure if the will of the voters was recorded accurately. Because the software is proprietary, we voters cannot know whether a promised "update" really solves the security flaws. Thus, Governors or Secretaries of State (both Republican and Democrat) in at least six states have since decided to ban or decertify most brands of DREs, plus in one state several optiscans too, based on studies by computer scientists who found significant security flaws. (See non-partisan websites like MoHonestElections.org, VotersUnite.org, VoterAction.org, BlackBoxVoting.org.)

Missouri is not among the states that have thoroughly tested their voting machines, so we risk being stuck with them through the November 2008 election.

What steps can we take to reduce our vulnerability to voting-machine fraud?

- Ask for a paper ballot (which is typically counted by an optiscanner). Don't use a DRE.
- 2. Urge your friends and neighbors to also ask for paper ballots.
- 3. Ask your legislators to push for laws that would (a) ban DREs in Missouri, (b) make paper ballots (not "paper trails") available in all elections, (c) require that the paper ballots and DRE paper trails be audited via a hand-count of enough randomly-selected precincts to assure a 95% confidence in the results.

The 2nd Annual Upper Current River CLEANUP and Kayak give-away Saturday, June 14 th, 2008 Take Dad to the River!

LOCATIONS FOR CLEANUP

- Baptist to Cedargrove (8 slow miles)
- Cedargrove to Akers (8 miles)
- Akers to Pulltite (10 miles)
- Pulltite to Round Spring (10 miles)
- Or you may cleanup a put-in/take out area such as Tan Vat, Baptist, Parker Ford, Cedargrove, Flying W, Welch Spring, Akers, Pulltite, Sinking Creek, Round Spring, or Jerktail.

Groups are responsible for their own river transportation. Canoes are available for rent at local liveries. Call Canoe Rentals for information on Stream Team discounts.

For more information call: Stream Team 1028, Jack or Mary Ficker 573-729-7065 or e-mail jficker@wildblue.net

Pre Registration is preferred, or Sign-up time 8:00-9:00 am , June 14th at Cedargrove, Akers, or Pulltite River Access points. Pick up your Mesh Trash Bags at these points.

A Bar-B-Q supper will be served to all registered participants at Round Spring Picnic Pavilion at 6:30 pm.

Drawing for Kayak and other prizes to follow supper. You must be present to win!

River des Peres Watershed Coalition Moving Forward

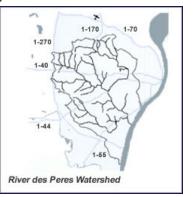
The River des Peres Watershed Coalition invites everyone-citizens, civic and municipal leaders, agency personnel-who is interested in the River des Peres and its tributaries to take part in our planning forums, river clean up, and restoration activities.

At our first gathering, which was attended by over 50 representatives from educational institutions, government entities, environmental organizations, and the general public, we discussed the critical issues that the community believes are affecting the River des Peres. Our second meeting in March was held at the Heman Park Community Center and included a short "field trip" to the river which flows just behind the center. Our next planning meeting will be held **May 27, also at Heman Park Community Center.**

In March we also held a successful river clean up on the reach of the River Des Peres near the intersection of Mona and Groby. About 25 participants met at the river to pick up litter from the stream and remove bush honeysuckle from the banks. Thanks to all the volunteers who helped remove about seven cubic yards of trash (including three shopping carts).

The River des Peres faces several problems, including water quality, hydrology, public awareness, and habitat quality. Please join us at the **May 27th meeting**.

The River des Peres Watershed Coalition was formed in 2002 to advocate for the protection and restoration of the St. Louis area's largest watershed. Encompassing the 114-square-mile area drained by the River des Peres and its



many tributaries (Gravois, Deer, Black, and Engelholm Creeks, among others), the River des Peres watershed takes in much of St. Louis city, University City, Pagedale, Clayton, Richmond Heights, Webster Groves, Ladue, and 36 other municipalities.

For more on the Coalition, please visit www.riverdesperes.org. Also you may contact Danelle Haake at riverdesperes@gmail.com for further information about the forum series, or about the issues facing the River des Peres.

The Skeptic Scam: Deciphering Disinformation in the Campaign of [Climate Change]

Alan Journet, ajournet@semo.edu Conservation Chair, Trail of Tears Group Also:

Department of Biology & Environmental Science Program

Southeast Missouri State University

NOTE: In order to avoid potential copyright infringement, it has been decided not to publish a series of graphs that illustrate the arguments presented here. For readers wishing to view the images, documentation and URLs (where available) of sources are provided. Follow the numbered endnotes for this documentation.

uring the last four decades, a scientific consensus developed about the health consequences of consuming tobacco products and the atmospheric consequences of continuing to release humanmade chlorofluorocarbons (CFCs). Despite campaigns of disinformation orchestrated by those with economic or political interests and commitments to denying the scientific evidence, public acceptance of the scientific consensus led to national / international action. In the case of tobacco, we now see warnings on tobacco products while in the case of CFCs, the Montreal Protocol of 1987 resulted in global efforts to reduce CFC use and release. As a result recent health reports suggest on the one hand that cancer rates are dropping, and on the other hand that the size of the ozone hole caused by CFCs appears to have stabilized - with recovery this century a possibility (if climate change does not intervene to undo the gains made).

The same campaign of disinformation that for years delayed our addressing the tobacco human health and CFC environmental health problems has been launched against the current scientific consensus regarding climate change. In some cases, this disinformation campaign is being waged by the same individuals employing similar tactics.

When we are diagnosed with a serious health condition demanding immediate medical treatment, our inclination is first - and reasonably – to seek a second and maybe third expert

opinion. We recognize that in medicine there is no certainty, and no guarantees - but prudence suggests treatment - the cost of doing nothing is probably greater than the cost of undergoing treatment. So it is with climate change.

The scientific consensus on climate change is identified in the IPCC (Intergovernmental Panel on Climate Change). The existence of climate change, the IPCC concludes, is unequivocal. The IPCC also concludes that there is a 90% or greater probability that human activities are contributing.

However, despite repeated scientific findings endorsing the conclusion that climate change is occurring, and that human activities are probably - at least in significant part - responsible, there remain a small, vocal, and well-financed band of deniers. These Climate Change Skeptics, however, are in disarray; they seemingly cannot collectively decide what they accept and what they challenge. Many - as will become evident cling blindly to conclusions drawn from data of many years vintage, either evidence that has been superseded by more compelling data collected and analyzed during the last five years or updated analyses of and corrections to earlier data.

While the evidence of climate change mounts, those promoting the campaign of denial have become shriller and more extreme in their claims. Jerry Adler noted (Newsweek, April 16 2007): "Global warming deniers have mostly been forced to concede that the Earth is really warming and that industrial pollution is at least partly to blame. They are now reduced to arguing that it may actually be good for you, or that the cost of reducing carbon dioxide pollution will be enormous, and fall most heavily on the developing world - without acknowledging that those are actually the very nations that will bear the greatest burden of drought, disease and famine as the climate changes". While this is the position adopted by some skeptics, others seem to dwell in a world at least ten years old, as if none of the data gathered in this century exist.

The skeptics' disinformation campaign consists largely of challenging the scientific consensus by promoting the doubts expressed by a small number of individuals. Among the skeptics only a few are scientists -some even in relevant fields - but many are not even scientists. In order to understand and combat this disinformation campaign, it is worth exploring what the so-called climate change skeptics argue. In this two-part series, I will explore the leading curiosities and myths emanating from the skeptics' camp.

I. A Paradox of Skeptical Climate Scientists:

Dr. Richard Lindzen, a Meteorologist at the Massachusetts Institute of Technology has testified as a critic of the Intergovernmental Panel on Climate Change (IPCC) analyses concerning the dangers facing us as a result of climate change. Yet Lindzen himself was a co-author of the 2001 National Academy of Sciences National Research Council report evaluating the IPCC Third Assessment Report (TAR) which concluded: "Greenhouse gases are accumulating in Earth's atmosphere as a result of human activities, causing surface temperatures and subsurface ocean temperatures to rise. Temperatures are, in fact, rising. The changes observed over the last several decades are likely mostly due to human activities." In relation to the precise cause, this report endorsed the IPCC evaluation that among the gases carbon dioxide, methane, ozone, nitrous oxide, and chlorofluorocarbons, released by human activities, the greatest climate forcing is due to the carbon dioxide. The report also acknowledged a temperature increase during the 20th century of between 0.40C and 0.80C (0.70F - 1.50F).

This Lindzen co-authored review also concluded that: "The full IPCC Working Group I report is an admirable summary of research activities in climate science, and the full report is adequately summarized in the Technical Summary." In short, in his 2001 scientific judgment Lindzen endorsed the IPCC evaluation of climate science evidence. It is somewhat paradoxical, then, that Lindzen now, as the evidence regarding climate change and its human causes has grown more conclusive, now argues that the IPCC is inaccurate in its assessment.

Another player in the skeptic game is Dr. John Christy of the University of Alabama (Huntsville). He is a noted researcher in the arena of upper atmospheric temperatures. In the early 1990s Christy published data that challenged the expectation from climate change theory that the temperature of the upper troposphere (some 10 -15 km above us) should be increasing. Christy's data have since been re-examined and adjusted not once but many times - as our understanding of the techniques employed improves. Indeed, Christy himself co-authored a paper in 2006 that stated in part: "...current upper air climate records give reliable indications of directions of change (e.g. warming of the troposphere, cooling of the stratosphere). Despite the fact that the apparent discrepancies reported 15 years ago have been negated, the skeptics continue to employ the discredited earlier reports to justify the claim that upper tropospheric temperature patterns challenge global warming theory.

Somewhat surprisingly, Christy recently

appeared in a favorite vehicle of the skeptics. In the 2007 British Channel 4 'documentary' entitled "The Great Global Warming Swindle" Christy argued the line suggested by his 1990s data as though the corrections had never been performed and accepted by him.

Thus both Lindzen and Christy are examples of scientists who appear willing to use old and poorly interpreted data to encourage skepticism on global warming trends. But even they are a outdone by skeptics such as novelist Michael Crichton (2004"A State of Fear", whose credentials as a science fiction writer rather than scientist have not kept him temperature relationship holds only through the early 1900s⁴ - not even to the year 1970 as Durkin portrayed it using incorrect 1991 data. During the second half of the last century the temperature anomaly exhibits a marked departure from solar activity. Again, the skeptics' claim is based on outdated and uncorrected data.

It should be noted, however, that solar activity is not dismissed by climate scientists. Indeed, it has been implicated in many climatic fluctuations in the historic and geologic past. The onset of glaciations of the last millennium may well be a consequence of solar patterns.

When we are diagnosed with a serious health condition demanding immediate medical treatment, our inclination is first - and reasonably – to seek a second and maybe third expert opinion... So it is with climate change.

from weighing in forcefully with misinformation on global warming. Amongst other criticisms, Crichton has claimed there simply is no global warming trend.

II. There Is No Warming:

Crichton has claimed that only long term temperature data from the U.S. are reliable - and these don't show any warming. But the NASA data that Crichton used to make his case ended in the early 1990s and were already outdated when his novel appeared¹ While these old data suggest, as Crichton claimed, that 1934 was the warmest year, if we look at current data including years past 1990² it is evident that the U.S. climate change is entirely consistent with the global pattern of warming. The years 1990 to the present have included many warmer years. Those who argue that the U.S. data do not support the claim of global warming are displaying either ignorance or a lack of intellectual honesty.

III. It's all driven by Solar Radiation Anyway:

In 'The Great Global Warming Swindle' Martin Durkin argued that solar activity is the cause for recent climate fluctuations (called 'the temperature anomaly'), and argument repeated by many skeptics. But data he utilized to depict that relationship terminated in about 1975³. However, the corrected updated solar activity -

IV. Post WWII Cooling Falsifies the Climate Change Theory

The standard depiction of the carbon dioxide temperature relationship shows temperature increasing along with increases in carbon dioxide starting with 1880⁵. But the immediate post WWII period shows a break in that relationship in that carbon dioxide increases while temperatures do not⁶. Skeptics argue that this means carbon dioxide cannot be influencing temperature. But criticism of climate change theory, exaggerating the post-war temperature decrease (as depicted the 'The Great Global Warming Swindle'⁷), is founded on the false claim that carbon dioxide is argued by climate change theorists to be the only cause for climate change.

A review of the IPCC 2007 report clearly shows that it is generally accepted among climate change theorists that many factors conspire to influence global temperatures⁸. Many factors have positive impacts on temperature, such as halocarbons, tropospheric ozone, water vapor and solar radiation. Meanwhile negative impacts are exerted by albedo (clouds) and aerosols. It is well know that following WWII there was an increase in human made aerosols in the atmosphere sufficient to negate the impact of increasing carbon dioxide. The post-war discrepancy has been adequately explained – but this explanation is simply ignored by the skeptics who continue to make the simple minded and deceptive claim that - according to climate change theory- only carbon dioxide influences global temperature.

In summary, the global warming skeptics described above have used various techniques to distract the public and lawmakers from reliable and comprehensive information regarding climate change. They have selected the data to consider, leaving out available data that do not support their point of view. They have tried to divert attention to factors, such as solar radiation, that have already been accounted for in current assessments. Finally they have distorted and simplified the climate change argument so as artificially to narrow issues under consideration. Although these skeptics still try to make their case, overwhelming evidence, such as that recently summarized by the IPCC, is finally receiving the attention from lawmakers and the public that it deserves.

Endnotes:

1. Michael Crichton 2004 State of Fear, Avon Books. p.97 US Temperatures 1880-2000

2. http://data.giss.nasa.gov/gistemp/graphs/ Scroll down to U.S. Temperature. It is clear that Crichton's graph comes from this data set, but it ends well before 2000.

3. http://i157.photobucket.com/albums/t63/izzy_bizzy_ photo/capture3.jpg depicts the captured graph shown in the movie where the correlation between solar activity and temperature looks tight.

4. http://fermiparadox.wordpress.com/2007/03/10/ swindlers/ Scroll down to see discussion of the movie graph and the correct updated solar activitytemperature patterns; these clearly indicate a breakdown in the correlation from the early decades of this century.

5. Scroll down to Figure 13 at: http://www. globalchange.umich.edu/globalchange1/current/ lectures/samson/climate_patterns/

6. http://en.wikipedia.org/wiki/Global_warming depicts the Keeling curve of carbon dioxide increase records at Mona Loa (HI) and the global temperature pattern since 1850.

7. http://i157.photobucket.com/albums/t63/izzy_bizzy_ photo/capture.jpg depicts the exaggerated contradiction in CO2 and temperature post WWII as presented in 'The Great Global Warming Swindle'.

8. http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ ar4_syr_spm.pdf the IPCC Summary Report for Policymakers summarizes the current status of the evidence.

9. http://en.wikipedia.org/wiki/Image:Radiativeforcings.svg provides a simplified graph depicting the relative positive and negative radiative forcing capacity of various atmospheric components.

Thank You

Missouri's Chapter of the Sierra Club would like to thank all of our members, donors, volunteers, and partners for their commitment to protect Missouri and leave our children a living legacy—clean air, clean water, and natural grandeur.

Greg Leonard

Virginia Love

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Concerned Citizens of Carroll County Concerned Citizens of Platte County Earth Share of Missouri Great Rivers Environmental Law Center Rosati-Kain High School Environmental Club Washington University School of Law, Interdisciplinary Environmental Clinic

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If we have omitted, misspelled or incorrectly listed your name, please accept our apologies and notify Melissa Hope, Development Director, melissa.hope@sierraclub.org (816) 806-6965.

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Green Lobby Day a Success

By Roy C. Hengerson

n Tuesday February 26, 2008 over 100 environmental and conservation minded people gathered in a basement hearing room of the State Capitol for the start of Green Lobby Day. The Missouri Sierra Club, Missouri Votes Conservation, and the Missouri Coalition for the Environment were the principal organizers of this annual event. Approximately 30 other organizations from around the state co-sponsored the Lobby Day.

It is critical to the success of good environmental legislation and the defeat of bad measures for citizens to contact their State Representative and State Senator. In person visits have the most impact on legislators. Participation in a lobby day is an excellent opportunity to meet your legislators and make an impact on the legislative process. Citizens do not need to be experts on any topic to have a valuable visit. Legislators want and need to hear from average

citizens with concerns about the environment. Thus, participants engaged in Green Lobby Day knowing



that their time was well spent.

After welcomes and a general orientation to the plans for the day, participants received a briefing on some of the critical environmental legislation before the 2008 Session. Then, both in groups and as individuals, people met with legislators. Key legislators were the focus of these visits; however everyone was encouraged to visit with their own Representative and Senator. Several legislators stopped by the Senate alcove where lunch was available and spoke with attendees. In the alcove, people debriefed organizers on the results of their legislative visits.

Attendees also had an opportunity to experience a hearing of the House Energy and Environment Committee. The Committee had a hearing on House Bill 1499, which would establish the Manufacturer Responsibility and Consumer Convenience Computer Equipment Collection and Recovery Act, sponsored by Representative Shannon Cooper (R-120). The Sierra Club is supporting this bill.

In 2008, there is a marked increase in interest among legislators in bills that would promote

energy efficiency, renewable energy, and solutions to the challenge of global climate change. Green Lobby Day helped to focus legislative attention to these issues. Throughout the 2008 Session, you can help make progress by contacting your state legislators in person, by phone, fax, e-mail, and by U.S. mail. By signing up for the state legislative alerts, listserv, and responding to calls to action, you can play a vital role in protecting Missouri's environment. For more information, contact Roy Hengerson at roy. hengerson@sierraclub.org, by phone at (573) 644-2828, or visit the legislation link on our website at: http://missouri.sierraclub.org/index. html

Some Bills of Note

The Sierra Club is supporting the following bills and urges you to take action to encourage your legislators to help enact them. A complete list of Sierra Club-supported bills can be found in the state legislative tracking report available on the Missouri Sierra Club's website.



SB1100 sponsored by Senator Bray requires state and local government buildings over a certain size to meet green building standards.

SB1117 sponsored by Senator Smith includes green building tax credits, subsidies for doing a home energy audit, sales tax holiday for purchasing Energy Star appliances, and other requirements and incentives for energy saving purchases and programs.

SB1262 sponsored by Senator Bray would establish mandatory renewable energy standards for retail electric companies, and other renewable energy promoting measures.

HB1666 sponsored by Rep. El-Amin would establish the Missouri Global Warming Solutions Act to reduce carbon dioxide emissions over time.

HB1932 sponsored by Rep. Harris (23) would prohibit large confined animal feeding operations (CAFOs) from being located near parks and historic sites.

HB2045 sponsored by Rep. Baker (25) authorizes counties to enact a land preservation sales tax.



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Contact Melissa Hope, Chapter Development Director, Melissa.Hope@ sierraclub.org, (816) 806-6965.

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

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Jurassic Park Marketplace Dinosaur Seeks More Public Financing.

By Mark Haim

n a July 31 interview with a New York Times reporter, Michael Wallace, co-chief executive of UniStar Nuclear - Ameren's partner in the proposed new Callaway reactor said, "Without loan guarantees, we will not build nuclear power plants."

They've picked our pockets before, and now they are back for more, tens of billions more. Having failed the test of the marketplace nearly three decades ago, the nuclear power industry has repackaged itself. Today it's trying to sell its overpriced product as the answer to global climate change.

Wall Street isn't buying it, however, so the nuclear lobby wants you and me, the taxpayers, to underwrite a whole new generation of plants. In December they convinced Congress to provide \$20 billion in federally guaranteed loans. And that's just the down payment -they say they need \$50 billion in guarantees for fiscal years 2008 and 2009, and more in subsequent years .

More than 50 years ago, when the Atoms for Peace program began, its backers promised us limitless energy so abundant it would be "too cheap to meter." By 1985, Forbes Magazine declared, "The failure of the U.S. nuclear power program ranks as the largest managerial disaster in business history, a disaster on a monumental scale." And in 2001, The Economist, Britain's leading financial journal, wrote "Nuclear power, once claimed to be too cheap to meter, is now too costly to matter."

For decades nuclear power has been a classic example of lemon socialism. Taxpayers have picked up the tab for everything from research and development to assuming ultimate responsibility for the deadly waste that needs to be isolated in perpetuity, to acting as the insurer of last resort in the event of a major nuclear accident. Over the 50-year period of 1948-1998, nuclear power received \$74 billion in federal research and development subsidies (in constant 2003 dollars). This was 56 percent of all federal energy research and development money.

Despite nearly six decades of pump-priming and \$13 billion in new subsidies in the 2005 energy act, nuclear power is still not ready to stand on its own two feet. Before Congress agrees to underwrite a new generation of nuclear dinosaurs, I hope they will consider the following:

- The last U.S. nuclear plants were ordered in 1973. No one really knows how much a new nuclear plant will cost or how long it will take to build one.
- Plants being built in Finland, China and Taiwan are all significantly over budget and behind schedule. In September, Thompson Financial reported Finland's Olkiluoto-3, the first reactor to be ordered in Western Europe since the disastrous 1986 Chernobyl accident, is delayed more than two years. Its original cost estimate was 3 billion euros (\$4.35 billion), but this has now risen to 4.5 billion euros (\$6.53 billion), and the latest estimated completion date is still four years off; thus the final price tag is still unknown.
- Moody's Investor Services in October 2007 estimated new generation nuclear plants, like the one Ameren is talking about building in Callaway County, Missouri will cost as much

as \$8 billion to \$9.6 billion each, more than double optimistic industry projections. .

The leading U.S. investment banks, including Citigroup, Goldman Sachs, Merrill Lynch and Morgan

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Stanley, in comments for rulemaking on the Federal Loan Guarantee Program, indicated their unwillingness to finance new nukes. They said in part: "We believe these risks, combined with the higher capital costs and longer construction schedules of nuclear plants as compared to other generation facilities, will make lenders unwilling at present to extend long-term credit."

- The Congressional Budget Office shares this skepticism. In a 2003 report examining costs of the prospective energy bill, it expressed concern that taxpayers would be saddled with heavy losses if loan guarantees were provided for nuclear plants, saying in part: "CBO considers the risk of default on such a loan guarantee to be very high - well above 50 percent. The key factor accounting for this risk is that we expect that the plant would be uneconomic to operate because of its high construction costs relative to other electricity generation sources."
- The Government Accountability Office in February expressed its concerns that taxpayers would bear an undue burden if the government

implemented a loan guarantee program, saying in part: "Although LGP guidelines call for borrowers to be charged fees to cover program costs, the program could result in substantial financial costs to taxpayers if" the Department of Energy "underestimates total program costs." They went on to say, "DOE will have to estimate the subsidy cost to determine the fees to charge borrowers, but it currently has no policies or procedures for doing so. Estimating this cost could be difficult because the program targets innovative energy technologies, and loan performance could depend heavily on future economic conditions, including energy prices, which are hard to predict accurately."

Where are we headed?

Before diving, it's essential to know how deep the water is and what rocks might lie below the surface. If we, the taxpayers, underwrite eight large new nuclear plants to the tune of \$48 billion, we might be saddled with huge losses.

Even if everything went well, however, with no defaults, is this really the best place to invest our limited funds? Consider: If eight large nukes are built, we would net only 12,800 megawatts of generating capacity. This \$48 billion, coincidentally, is about the same amount of capital currently invested in the entire global wind industry. But \$48 billion has purchased 74,000 megawatts of generating capacity.

If our interest is in cutting our use of fossil fuels - both because they are finite and because burning them alters the climate - the fastest and most cost-effective route is investing in efficiency improvements and renewable energy sources. We can get the energy we need, and get it more quickly and more cheaply, if we eschew the nuclear option. We would also avoid the downsides of nuclear power, including waste, accident risks, terror threats, transportation issues, weapons proliferation risks and more.

As Amory Lovins, CEO of the Rocky Mountain Institute, said in a 2006 paper, "Every dollar invested in nuclear expansion will worsen climate change by buying less solution per dollar."

If we take seriously the charge to address climate change and peak oil, we must move expeditiously to invest in efficiency and renewables. We can't afford to allow the nuclear industry to hijack our energy policy and divert us from cost-effective solutions.

Mark Haim has been active around sustainability and energy concerns for more than 30 years. He is a co-founder of Missourians for Safe Energy and can be reached at mail@mosafeenergy.org.

An earlier version of this article was printed in the Columbia Tribune November 2007.





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 general information about outings call Wayne Miller, (314) 628-9084.

For additional outings submitted after our publication deadline and for changes, please check the Eastern Missouri Group website at: http://missouri.sierraclub.org/emg. Outings cost one dollar and are open to the public. Please call the leader in advance for details, approval, or if you plan to cancel. No guns, pets, or radios are permitted on trips. May, Sat: Calling all Trail Jasper for diner and possibly a show. Leader: Colin Maag

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 www.sierraclub.org/chapter/forms/ or call (415) 9797-5630.

Workers. We need your help to finish our trail work at Hawn S.P. Throughout May we will get together on Saturdays to finish our work

by June 7th. Call for our Trail Maintenance schedule. Paul Stupperich, (314) 429-4352, lonebuffalo@earthlink.net, or Bob Gestel, (636) 296-8975, rgestel@earthlink.net

May 2, Fri: It is time for the annual 6 - 10 mile azalea hike at Hawn S.P. See the new re-route trail that will take us right thru the patch and up to the overlook. Suzanne Smith, (618) 281-4762, thisissuzanne@yahoo.com

May 2, Fri: Mulberry River, Arkansas. This river is very rainfall dependent. If there is too much or too little rain, the back up will be the Eleven Point. It is a I (+) - II depending on water level. It is easier than the Buffalo, but still has beautiful scenery. It is a protected scenic national waterway. We will do the stretch from Wolf Pen to Turner's Bend. We will be car camping and will be staying at Turner's Bend. If the campground is full, the back up plan is to camp at Byrd's . It is a good beginning WW stream at some levels. Flotation & skirts required. Leader: Colin Maag Tel:314-721-7397 email: colinmaag@sbcglobal.net

May 3-4, Sat-Sun: Buffalo River, Ponca Arkansas. The Buffalo is one of the première rivers in the nation. The river gorge is much deeper then what we have here 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 diner and possibly a show. Leader: Colin Maag Tel:314-721-7397 email: colinmaag@sbcglobal.net

May 5, Mon: Big Piney, Arkansas. Nothing like the Big Piney in Missouri. Believe it or not, it is all national scenic riverway and even prettier than the Buffalo. At the right levels, this is a very lively stream. Flotation & skirts Required. It is a good beginning WW stream. The low water back up is to canoe lower down on the Buffalo. Leader: Colin Maag Tel:314-721-7397 email: colinmaag@sbcglobal.net

May 17, Sat: Onondaga Cave State Park. Onondaga Cave is one of the area's most unique and spectacular caves with millions of formations, some of which (Lily pad formations) are found in only a few caves in the world. The tour will be a one hour guided tour led by a park ranger. The charge will be \$5 per person if we have a group of 10 People. Bob Herndon, (314) 961-4811.

May 18, Sun: Canoe/kayak trip on Big Creek if water levels are good. If not, we will do the Mineral Fork or Courtois Creek. Rental canoes may not be available. Jonathan Lehmann, cell (314) 791-3969.

May 21, Wed: We'll do a fairly rocky and hilly 4-5 mile out-and-back day hike on the Green Rock Trail, starting at the Rockwood Reservation trailhead. For information call Margot Kindley at (636) 458-4063.

May 23, Fri: We head north to Cuivre River S.P. for our 6 - 9 mile exploratory hike. Scenic overlooks, shallow streams. Suzanne Smith, (618) 281-4762, this suzanne@yahoo.com

May 24-26, Sat-Mon: Three day canoe trip on an Ozark Stream. George Behrens, (314) 821-0247.



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May 25, Sun: Canoe Float down the Meramec/Explore Green Cave. Utilizing the Meramec S.P. Canoe Rental, We will float from the Sappington bridge down to the Boat ramp at Meramec S.P. We'll stop and explore Green Cave on the way down the river. The charge is \$37 for the canoe rental and transportation. Each member must make arrangements with Meramec Canoe Rental and pay for their canoe before May 25. Bob Herndon, (314) 961-4811.

May 28, Wed: 4-6 mile easy day hike at Babler State Park in West St. Louis County. We'll enjoy the Dogwood and Woodbine trails with an optional 2-mile walk on the Virginia Day Memorial Nature Trail. For information call Margot Kindley at (636) 458-4063.

May 30, Fri: Call for info on our weekly 6 - 10 mile adventure. Suzanne Smith, (618) 281-4762, thisissuzanne@yahoo.com

June 7. Sat: Day Hike to Valley View Glades. We will venture out onto the Glades to see the wildflower displays. We will also walk the 3 mile trail to get great views of this area. As always some cross country may occur on this hike. Proper hiking equipment and conditioning may be required. Paul Stupperich. (314) 429-4352, lonebuffalo@earthlink.net, or Bob Gestel, (636) 296-8975, rgestel@earthlink.net

Jun 8, Sun: Canoe/kayak trip on a stream in the Meramec basin. Toni Armstrong & Richard Spener, (314) 434-2072.

June 11, Wed: This 4.5-mile day hike in West Tyson County Park features moderately rocky and hilly climbs on the popular Flint Quarry Trail. For information call Margot Kindley at (636) 458-4063.

June 13. Fri: There is always something blooming at Shaw Nature Reserve. Join us on our 6 - 9 mile adventure. Suzanne Smith, (618) 281-4762, thisissuzanne@yahoo. com

Jun 14, Sat: Cathedral Cave. As we continue to explore the breathtaking beauties of the caves of Missouri, this cave promises to be especially interesting. It is in Onondaga Cave S.P., but a different cave. The tour is 2-hr and the charge is \$3 per adult for groups of 10 or more. After a 1/2 mi walk through the woods we will enter the cave through the natural entrance. The walk will be about 1 2/3 mile with considerable elevation on good surface. The drive is $1 \frac{1}{2}$ hours to the park. Bob Herndon, (314) 961-4811.

Jun 22, Sun: Canoe/kayak trip on the Big River. Canoe rentals are not available. Toni Armstrong & Richard Spener, (314) 434-2072.

Jun 22, 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 to Cane Bottom . We will leisurely float back down the meandering river through an excellent tubing run and under the 200-ft high bluffs over Meramec caverns. Several options are available depending on the river level. Bob Herndon, (314) 961-4811.



Jun 25, Wed: Day hike on the 5.3-mile wooded and shady Clark Trail in Weldon Spring with beautiful vistas from bluffs overlooking the Missouri River. For information call Margot Kindley at (636) 458-4063.

Jun 28, Sat: Find lots of "creepy-crawlers" as we test water quality on Fox Creek near Eureka. Help us identify the aquatic insects, test for DO and other chemical parameters, and measure stream flow. We should see a lot of macro invertebrates. Call Leslie Lihou at (314) 726-2140, or Jim Rhodes (314) 821-7758.

Jun 28, Sat: Inner-tubing on the Meramec. See description for Jun 22, above. Bob Herndon, (314) 961-4811. April 27 (Sun) - Hidden Valley Park, Kansas City, MO Join us on a leisurely afternoon hike to see this local wildland jewel in progress. Bring work gloves as we will pick up trash or pull honeysuckle along the way. Doris Sherrick, (816) 779-6708 djsher@fairpoint.net

Thomas Hart Benton Group http://missouri.sierraclub.org/thb/outings

May 3-4 (Sat-Sun) - Ozark Stream Overnight Float Trip, Destination TBA Call or email for further details. \$10 donation requested Terry DeFraties, (913) 385-7374 theerustbucket@aol.com

May 10 (Sat) - Urban Bike Safety Workshop and Ride, Crossroads District Kansas City, MO We will watch "Effective Cycling", a bikesafety video, followed by a Q & A session. Please make sure your bike is able to ride several miles without any problems. All riders must wear a bicycle helmet. Bring a bike, and join us for this Saturday morning workshop and ride. We'll reward ourselves by riding to lunch after the class. \$5 donation requested Claus Wawrzinek (816) 517-5244 clausw@att. net or Paul Gross, (816) 228-6563 wildwoodp@hotmail. com

May 16-18 - (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 31 (Sat) - Loose Park Champion Tree Compass Course, Kansas City, MO

Bring your compass and we will learn to set bearings to find unique trees in one of the most beautiful parks in the city. \$5 donation requested. Eileen McManus, (816) 523-7823 eileen4250@sbcglobal.net

Jun 14 (Sat) - Tallgrass Prairie Walk, Olathe, KS Kill Creek has as many as 200 plant species on a 20-acre remnant that has never been plowed. See how many you can identify. \$5 donation requested. Mike Miller (913) 362-2600 mrmiller1@mindspring.com

Osage Group

http://missouri.sierraclub.org/osage

For updated outings visit website at: http://missouri.sierraclub.org/osage/contact.htm or call Greg Leonard (573) 443-8263.

Trail of Tears Group http://missouri.sierraclub.org/trailoftears

For updated outings visit website at: http://missouri.sierraclub.org/trailoftears/ or call Adam Gohn (573) 270-0053

White River Group

http://missouri.sierraclub.org/osage

Contact Jennifer Ailor, outings chair, at (417) 581-4018, or check with the White River Group's website at http://whiteriver.sierraclub.org/ for details about these trips in April and June. A May trip is being planned.

April 26 - Join a work crew from 9 am to noon removing invasive species at the Springfield Conservation Nature Center in Springfield. Bring lunch, work gloves, clippers and digging tools. We'll hike the center's trails after the work session and enjoy lunch on the trail.

June 14- Visit Valley Water Mill Park north of Springfield at 9 am for a two mile hike and a stop at the Sierra Club's rain garden. Learn what wildflowers and native plants have been planted there and help with some light weeding and maintenance. Bring lunch, work gloves and a spade.

The Way We Eat: Why Our Food Choices Matter

by Peter Singer and Jim Mason

reviewed by Caroline Pufalt

t least three times a day we make significant choices that effect the environment. Authors Peter Singer and Jim Mason state that: "No other human activity has had as great an impact on our planet as agriculture. When we buy food we are taking part in a vast global industry. Americans spend more than a trillion dollars on food every year. That's more than double what they spend on motor vehicles, and more than double what the government spends on defense"

Unfortunately the global food industry produces pollution, causes loss of wildlife on land and sea and causes untold suffering of farm animals - many reared in totally artificial factory conditions.

Our mega- agricultural system also harms and exploits many human beings. It has displaced family farmers, it dehumanizes workers in factory farms and slaughter houses, and ironically it has contributed to obesity and other diet related health problems.

However, we need to eat and cannot all grow our own food, so how can we make the best ethical choices given today's global food industry? Authors Peter Singer and Jim Mason are well placed to help us answer this question. Many readers may recall Peter Singer as the well known and controversial philosopher, ethicist and animal rights advocate. And we as Missourians need to know Jim Mason. He is a Missouri native whose family roots go back for five generations of farming in southwest Missouri. Mason is an attorney who currently lives in Virginia. But he has not forgotten his family farm roots. He and Singer collaborated earlier on a book called Farm Factories, one of the earliest works to expose the horrors of factory farming.

In their discussion of factory farming, especially as related to poultry, Mason draws on his experiences in MO and even mentions the Sierra Club's work against factory farming - also called confined animal feeding operations (CAFOs).

CAFOs have a bad reputation in that their growth has harmed many family farms, they generally make annoying neighbors and keep animals in unspeakable conditions. Recent information also suggests they may harm human health. For many years there has been concern about the large amounts of antibiotics used in CAFOs. Conditions for the animals are so poor and crowded that sickness is a constant risk. Now, even more recently than the publication of Singer and Mason's book comes a study that suggests a link between CAFOs and a deadly antibiotic resistant strain of staph infection (MRSA). See the Nov 2007 issue of Veterinary Microbiology for more.

For Singer and Mason, it's a no brainer - meat from a factory farm is a unethical choice.

In their search to explore ethical food choices Singer and Mason follow the food choices of three families and the impacts of their choices. One family's diet is fairly traditional, another less meat centered and the third is vegan. The authors consider the environmental, social justice and animal welfare impacts of various choices and their analysis can be quite complex.

For example, while they accept the premise that buying local is usually a good choice, they also consider seasonal choices, energy and transportation costs and the global market. The end result is that buying locally and in season is almost always a good choice. But purchasing fairly traded goods from developing countries is also valued - and there are more than coffee and chocolate fair trade choices.

The authors devote attention to sorting out the claims made regarding several aspects of farming.

They seem to enjoy, for example, tracking down the facts behind various statistics regarding how much water it takes to produce a pound of beef, pork, poultry or vegetable protein. The results are useful of course the vegetable protein is most efficient - and the analysis exposes some of the pitfalls of the casual and sometimes purposely deceptive use of statistics in public discussion.

Singer and Mason evaluate the environmental impacts of food choices in some detail. But their view includes other values as well. Fortunately those values rarely conflict. They summarize their goal as that of providing a guide to eating ethically without being fanatical. And they succeed.

Singer and Mason's five principles for making conscientious food choices are:

- 1. **Transparency**: we have the right to know how our food is produced.
- 2. **Fairness**: producing food should not impose costs on others or unsustainable costs on the environment.
- 3. **Humanity**: food should be produced without inflicting unnecessary suffering on animals
- 4. **Social responsibility**: workers are entitled to fair wages and working conditions
- 5. Preserving life and health justifies more than other desires: this means that the need for good nutrition is important and may sometimes "trump"other values. But we should not choose food that violates principles 1-4 when other nutritious food options that do not are available.

Our daily food choices are truly a way in which we can make a difference. And if we want to go a

step further and lobby for more responsible farming practices and more sustainable agriculture, Singer and Mason's book also provides a guide to organizations which can help.

The Sierra Club Guide to Sustainable Eating

Of course one organization which supports ethical and sustainable food choices is us - the Sierra Club. Did you know that you can even find recipes on the Club's website? The Club has a national level volunteer entity called the Sustainable Consumption Committee. They have developed a segment on the website dedicated to "the true cost of food". To check out recipe ideas and solutions visit: www.sierraclub.org/sustainable consumption/ and

www.sierraclub.org/sustainable_consumption/ and then click on the "true cost of food".

ATV abuse at Lower Rock Creek

photo by Scott Merritt, www.mowild.org

ower Rock Creek is one of the many jewels of the Mark Twain NationalForest. Unfortunately that jewel is

being tarnished by illegal All Terrain Vehicle (ATV) use in the area. Although most of the area is closed to motorized recreation it is still subject to illegal cross country ATV



traffic. We all know the erosion, disruption, habitat damage, noise and pollution that can cause. In addition, a visit to Lower Rock Creek found that "foot traffic only" signs had been removed and saplings had even been cut down to widen access for illegal traffic.

Contact the MTNF supervisor and tell him of your displeasure at this situation. Lower Rock Creek is not the only area suffering from ATV abuse. Why is this not a bigger priority for the MTNF management? If they don't have enough resources to do a better job, what do they need? If not, what is their excuse?

Paul Strong, Forest Supervisor, 573.364.4621 Mark Twain National Forest 401 Fairgrounds Road Rolla, MO 65401 www.fs.fed.us/r9/forests/marktwain/contact/

For more information on our efforts to protect Lower Rock Creek and other areas in the MTNF contact Caroline at cpufalt@sbcglobal. net or visit our chapter website at http://missouri. sierraclub.org and plan to attend our upcoming **Missouri Wilderness Conference Sept 13th.**