

## Fox Metro Shows Their Stuff

by Nate Stelton

**O**n one crisp Saturday morning at the end of January, Fox Metro Water Reclamation District gave a tour of their Aurora-located Combined Sewer Overflow facility to a small group of VOF water activists. As it turns out, this rare treat was more fascinating than many museums. Engineer Bob Bauer and District Manager Tom Muth graciously provided an interesting and information-rich presentation and guided walk throughout the building, located on Broadway just north of downtown Aurora.

As its name implies, this facility exists to handle excess waste water generated by the run-off from heavy storms, which combines with household effluent and then would otherwise overtax the capacity of the existing network. In the Aurora area, there are three diversion points that collect this overcapacity material and direct it to the facility, which was constructed in 1998.

The facility processes this waste water to a near-clean state and, after this processing delay, reintroduces it into the pipe that takes it to the Water Reclamation facility in Oswego, presumably after the storm's peak when capacity is again available. The overflow facility is capable of handling 21 million gallons per day, which translates to roughly 14,000 gallons per minute. It can detain approximately 1.5 million gallons at a given moment, and material takes about three hours to pass through the facility.

The process begins with filters and grit washers, which removes larger objects (typically leaves), then separates out sand and gravel. The material is then pumped and routed through a maze-like series of channels and holding chambers for clarification and chemically induced disinfection. Output is then returned to the system. The entire process undergoes perhaps a dozen or so stages (depending on how one defines a stage) and is contained entirely indoors.

There are a couple remarkable aspects



Photos by Nate Stelton.

about the overflow facility, aside from its stunning visual impact. First, the apparent cleanliness of all areas belies the nature of its function. Everything seemed clean and sanitary and there wasn't even a hint of offensive odors. Second, the entire facility is unmanned — the machinery and process are entirely automated.

We are indeed grateful to Fox Metro for this wonderfully educational opportunity.

## From the Co-Chair

Hi, I share the chair with Charlie Zine. I've been an active Sierra Club and ExCom member of Valley of the Fox for many years as well as a community organizer and activist. Many of you know of my love of and my passion for the environment, as well as my unending hope for the future of this little planet teeming with life. It is what inspires me and keeps me going. I believe we are at a precarious time where, if there are not major changes, we may lose irreplaceable natural things.

My wish for the year while co-chair is that, at the end of this term, we've made a positive impact on our natural world, and that it is better than when we started. We can achieve this by acting locally while thinking globally. Never underestimate the power of one.

Some of this year's projects are going to collectively need a lot of time and energy. I am asking all of you to please give or volunteer what ever you can to these efforts, no matter how small or large.

By press time, Super Tuesday Election Day will be over; we'll have chosen the candidates to run in the November election. Frequently we are hearing the word "change" and it is desperately needed if we want to bequeath a planet that our children and grandchildren can flourish in. With so much at stake, I urge everyone who cares about our nation to vote. It is imperative that we fulfill our obligation and evaluate each candidate on his/her own merits without regard to political party. You have the power to change the direction of this nation.

When I first became an active Sierra Club member I volunteered to be an "armchair lobbyist." What began as being encouraged to "send a few e-mails" evolved to a giant stack of correspondence from national and local legislators. There have been many positive changes. I like to think I've been heard. I encourage you to be heard, too. A symphony is always louder than a solo.

In order to be successful, we will need additional volunteers to help with projects that include 1) Water monitoring of streams and wetlands that drain to the Fox River, 2) Air issues, including placing additional air monitoring equipment, 3) Conservation and wildlife issues, 4) Global warming, 5) Urban sprawl, 6) Earth Day events and the Fox River clean up, 7) programs, 8) outings, and 9) political and lobby issues.

A project I will work on is the need to keep harmful pharmaceuticals not filtered out by treatment plants out of the Fox River and other waterways. The need to educate about proper disposal methods is an important one, as studies are showing detrimental effects to amphibians and mammals exposed to these chemicals.

These projects are just some of what Valley of the Fox is doing. But it takes you. So whatever you are interested in — saving a 100-year-old oak, stenciling storm drains, taking children for a walk in the woods and teaching them a reverence for nature, or just writing a check so others may carry on — know that there is a ripple effect and you can and do make a difference. So find your passion and, in the words of a commercial, "Just do it"! Most of all, let's have fun!

Terri Voitik, Terri.Voitik@illinois.sierraclub.org

---

# EPA Issues 2006 Air Quality Report

by Ron Bedard

In December, 2007, the Illinois Environmental Protection Agency issued its Annual Air Quality Report for 2006. These are the highlights.

Regulated air pollutants consist of:

- Ozone (primary cause of most health effects of pollution)
- Particulate matter (cause of health and visibility difficulties)
- Sulfur dioxide (cause of respiratory diseases and infections)
- Carbon monoxide (reduces oxygen-carrying capacity in the lungs, aggravates cardiovascular diseases)
- Nitrogen dioxide (deep lung irritant)
- Lead (causes behavioral damage, interferes with specific enzyme systems).

The statewide summary of air quality in 2006 was improved over 2005, and generally better than the average of the 1990s. For ozone, there is a significant deal of year-to-year fluctuation, although the 10-year trend is basically flat. There were no days in 2006 on which the ozone level exceeded the National Ambient Air Quality Standard (NAAQS).

For particulate matter, there were no days in 2006 on which the particulate matter level exceeded the NAAQS. Particulate matter is measured for two ranges of sizes of particles, 10 micron and 2.5 micron. The larger particles, called PM-10, affect the nose and throat, while the smaller particles, called PM-2.5, affect the lungs and circulatory system. The 2006 averages for both sizes of particles was down from 2005;

PM-2.5 was about even with 2004, while PM-10 was down from both 2004 and 2005.

For Carbon monoxide, the trend has been slightly downward since 1997, with approximately a 5 percent decrease from 2005 to 2006. Sulfur dioxide showed a decided decrease for both 2005 and 2006 over the 10-year average.

The nitrogen dioxide annual trend has been generally stable for the past 10 years, 1997-2006. There have been no violations of the national standard for NO<sub>2</sub> since 1980.

The greatest success story in controlling criteria pollutants is lead. As a direct result of the Federal Motor Vehicle Control Program which has required the use of unleaded gas in automobiles since 1975, lead levels have decreased by more than 90% statewide. Lead levels in the air have generally decreased further in the last 10 years (1997-2006).

These criteria pollutants are not the only components in the air we breathe. For others, there are currently no State or Federal ambient air quality standards. These other components include arsenic, cadmium, chromium, iron, manganese and nickel, and these are known to have toxic properties. In addition, sulfates and nitrates are part of the pollution, and these can lead to acid rain. The areas with the highest metals concentrations are generally the heavy industrialized areas of the Metro-East (Granite City and East St. Louis) and South Chicago — Cermak and Maywood, especially for iron and manganese.

The Air Quality Index (AQI) is the national

standard method for reporting air pollution levels to the general public. The AQI is based on the levels of six "criteria pollutants," namely ozone, sulfur dioxide, carbon monoxide, particulate matter PM-10, particulate matter PM-2.5, and nitrogen dioxide. Data from pollution monitors in an area are collected, and the AQI subindex for each pollutant is calculated. Once all the subindexes have been calculated, the highest value is chosen by inspecting the numbers. That number becomes the AQI for the area, and the pollutant having the highest number is the "critical pollutant." If two pollutants have the same highest value, then both are reported as critical pollutants.

AQI categories and ranges are as follows:

0-50 Good

51-100 Moderate

101-150 Unhealthy for sensitive groups

151-200 Unhealthy

201-300 Very Unhealthy

301 and above Hazardous

Thus, an AQI of 61 and Critical Pollutant PM-2.5 means that the air quality is Moderate, and the highest concentration pollutant is PM-2.5.

Lake County, Aurora and Elgin, Joliet and Will Counties, Rockford, Quad Cities, Champaign, Normal, Decatur and Springfield all had 75 percent or more "Good" days. Metro-East (i.e., St. Louis area) had less than 50 percent "Good" days, but had 99 percent combined "Good" and "Moderate" days. The City of Chicago had 52 percent "Good" days and 48 percent "Moderate" days.

---

## Earth Day River Clean-Up

by Fran Caffee

What are you doing Saturday, April 19?

VOF will have our annual Fox River Clean-up in downtown Aurora. We need YOU. If you helped before, we need your experience. If you're contemplating your first clean-up, we need you, too. We have a good time, do a great job, then hose down and have lunch.

Meet at 8:30 a.m. at 80 N. Broadway (Rt 25, behind Aurora Township office) to sign in, get supplies, and choose a spot. We supply gloves, bags, snacks, and water (not disposable bottles). Bring a water bottle and appropriate (grubby) clothing. Free Sierra Club logo aluminum water bottles for the first 25 to register.

---

## Snippets

**Upper Mississippi.** On January 14, Brad Walker from the Prairie Rivers Network ([www.prairierivers.org](http://www.prairierivers.org)), gave a presentation on the upper Mississippi River's current state. As a follow-up, Brad offered "The Upper Mississippi is in poor condition and getting worse every year. The 2007 Water Resources Development Act includes a \$1.5 billion program to begin addressing ecosystem restoration along the river but will be competing against many other projects for limited federal budget dollars. Illinois will need to provide an estimated \$70 million over the next 15 years to fund Illinois' portion of the restoration work."

"Prairie Rivers Network will be working with other interested groups and ask for the support of Sierra Club members across the state to help advocate for this funding. We will keep groups informed of the status of this long-term activity."

**Don't Move Firewood.** This message from the USDA was spotted in the *Chicago Tribune*: To help prevent the spread of the Emerald Ash Borer (EAB) beetle, always keep firewood in your county and buy only from known sources. Don't accept firewood from EAB-infested states. Burn your winter supply before May 1st. When camping or hunting, buy firewood at your destination.

---

## Paddle the Fox: Two Upcoming Outings

by *Charlie Zine*

The Valley of the Fox Group is planning two separate canoe/kayak trips for the Fox River this spring and summer. This is a chance to see two great sections of the Fox that flow through natural areas and small towns. Rentals will be available or members can bring their own boats.

The trip on Sunday, May 18, will begin in Algonquin and end just past Dundee. We'll break for lunch at the Fox River Shores Forest Preserve in Carpentersville. This

393-acre facility has over one mile of shoreline with springs and "seeps" that form "Hanging Fens." Rare plants such as Vanilla Grass, Twayblade Orchids, and Turtle Heads are common in these fens. In May, the drier portions are often covered with Pink Flowering Crabapples, and White Plums.

The second trip on Sunday, July 20, starts in Yorkville and proceeds about seven miles downstream to Millbrook. This trip will

stop for lunch at Silver Spring State Park, a 1350-acre facility with natural springs, lakes, and native prairie restorations featuring several varieties of prairie plants.

For either trip, if you bring a boat, the cost is \$10. Single kayak rentals are \$52 (includes PFD and paddle). Canoes and double kayaks are also available. Shuttle rides are included in the price. For more information, contact Charlie Zine at 630-788-6666 or [charles.zine@amcore.com](mailto:charles.zine@amcore.com).

---

## An American Dream Goes Up in Smoke

by *Barbara Vrchota*

Joel Laws has a problem. "My wife and I are a recently newly married couple and moved into our first home together in December of 2005. If you can, for a second, try to remember when you and your significant other first started out in the adult world. Imagine starting a chapter in your life of starting a family, moving into a new home and looking forward toward your future together."

"Now imagine having all that taken from you. This was our case, as we have had our clean air and enjoyment of our property taken from us without a choice. Additionally, we have been told by our community leaders and our state and federal public administrators that we don't have a legitimate complaint for our clean air. This is what has happened to us by our neighbors' actions by installing an Outdoor Wood Boiler."

What is an Outdoor Wood Boiler (OWB)? According to Central Boiler and Outdoor Boilers of Michigan's web page, it is an efficient way to provide your home with all your heating needs. A homeowner can eliminate problems indoors caused by the standard indoor wood stove. There is no more tending to the stove, or fire hazards.

Outdoorwoodfurnace.com claims in its ad that it can lower utility bills, and heat water heaters, spas, pools, and garages.

Here's another burning question. Is it an eyesore? Does it take up a lot of yard space? Surfing sites such as [www.central-boilers.com](http://www.central-boilers.com), you'll find photos of these heat sources, which resemble small aluminum or wood sheds.

It doesn't sound too bad, does it? Well, shortly after Joel and Melissa moved into their

home in Albers, IL, a neighbor installed an outdoor wood boiler. Soon came the smoke and soot. Joel says it killed the bushes around the house and turned their white-sided home yellow. Next, constant sore throats, coughing and headaches started. The only way to relieve the symptoms was to leave the house. They were sick of being sick, says Joel.

Sounds nightmarish, but it only gets worse. When Joel contacted his local municipality, he was told he has no complaint. He can't do a thing to protect the air he and Melissa breathe in or around their house. Joel says, "I have become passionate about my freedom for clean air. I had this circumstance brought upon my wife and I without choice. I am looking for support in any way possible."

After the holidays, Joel and Melissa decided to move from their home. Their American dream has, unfortunately, gone up in smoke.

There is some good news in all of this. Joel and Melissa have created a web page on mspace to educate the public and hopefully make a change. "I want the state to at minimum require people to fall under what the



*Photo by Joel Laws.*

U.S. EPA standards are for these things. Not within 100 feet of someone's home, not be used as a primary heat source, and burn dry seasoned wood. If my neighbor did any of the above items, we may still be able to live in our home." Joel says.

Joel Laws is now the Central States Regions Director for the Clean Air Revival Now, a non-profit group in California. Learn more about OWBs at [www.burningissues.com](http://www.burningissues.com) or [myspace.com80/freedomofair](http://myspace.com80/freedomofair).

---

## Organic and the Budget

by *Fran Caffee*

If your budget is like mine, sometimes it doesn't want to stretch to include all the fresh organic fruits and vegetables I want. But did you know some fruits and vegetables have higher amounts of pesticide residue than others? The twelve with the highest amount of pesticide residues are peaches, apples, peppers, celery, nectarines, strawberries, cherries, lettuce, imported

grapes, pears, spinach, and potatoes. These are the ones to spend your money on and get organic if possible. The twelve with the lowest pesticide residues are onions, avocado, frozen sweet corn, pineapples, mangoes, frozen sweet peas, asparagus, kiwi, bananas, cabbage, broccoli, and eggplant. When short of cash, go ahead and buy conventionally grown versions of these.

# VOF Calendar of Events

For more information about outings and hikes, see the Outings section of the *Lake & Prairie* and also the VOF web site.

All meetings are held at the Batavia Public Library at 7 p.m. the 2nd Monday of each month except July, August and December. The public is invited to attend.

## April 14 (Monday) -

General membership meeting.

Local conservationist Jon Duerr speaks on native species in Kane/Kendall county and how to incorporate them into your garden.

## April 19 (Saturday) -

Earth Day: River clean-up in Aurora.

See accompanying article in this issue.

## May 12 (Monday) -

General membership meeting.

Guest presenter Leo Modica, bird photographer, brings us our feathered friends — through the lens.

## May 17 (Saturday) -

Quarterly Water Sentinels Monitoring Day.

Contact [fran.caffee@sierraclub.org](mailto:fran.caffee@sierraclub.org).

## May 18 (Sunday) -

Canoe/Kayak Outing on the Fox. Algonquin to Dundee; see article in this issue.

## June 9 (Monday) -

General membership meeting.

Julie Koivula speaks on how to live greener. She'll discuss rain barrels, rain gardens, and things we can do to help the environment and save money.

## July 20 (Sunday) -

Canoe/Kayak Outing on the Fox. Yorkville to Millbrook; see article in this issue.

## July 26 (Saturday) -

Paddleboat fund-raising excursion in St. Charles. Check the website for details.

## September 8 (Monday) -

General membership meeting.

Open house social. Get acquainted, touch base, and network.

## LOOKING FOR NEW OUTINGS LEADERS

We need local outings leaders. To become a local leader you need to take a Standard First Aid Course offered by the American Red Cross and a weekend OLT (Outdoor Leadership Training) through the Sierra Club.

The Fox Valley area has lots to offer: biking along the Fox River, hiking at numerous forest preserves such as Nelson Lake, and paddling on the Fox. Being a leader is a great opportunity to get people outdoors and share environmental concerns. If this is something you'd enjoy doing, send an e-mail to: [julieakoivula@sbcglobal.net](mailto:julieakoivula@sbcglobal.net).

## VOF Loses Two Friends of the Earth

by Fran Caffee

On January 1, Ron Harding passed away in Ohio, where he and wife Marion retired a few years ago. They were VOF Conservation Chairs for a number of years and worked very hard on National issues, especially NAFTA. Ron continued his activist work in retirement, using his motorized chair to corral a group of fellow male residents to an Environmental Discussion Group on Friday mornings. One of Ron's long-time friends made a sizable donation to the Sierra Club in his honor.

In late January another member of the early VOF Group passed away.

Sister Jane Martin was a kindred soul, one that we should all be fortunate enough to know at least once in our life. I can still see her at the end of Veterans Park in Aurora, feeding the geese.

Sister Jane requested that memorial donations be made to the Sierra Club.

The world is a better place for having had these dedicated activists in our midst.

## Get on a Custom E-mail List

Get involved! Please check the VOF Web site ([sierraclub.org/chapters/il/vof](http://sierraclub.org/chapters/il/vof)) for announcements of new listserv e-mail mailing lists. Listservs are easy to subscribe to, just as easy to unsubscribe from, and are available as individual messages or as a daily digest.

## Save Paper! Save Trees! Save Money!

You can now receive the 21st Century Fox electronically. We talk about saving trees and being environmentally responsible. This is one way to walk the walk.

You can unsubscribe from the paper version of the Illinois Chapter's *Lake & Prairie* (which includes the *21st Century Fox*), and instead receive an e-mailed announcement and link to download the new *Lake & Prairie* from the chapter website ([illinois.sierraclub.org](http://illinois.sierraclub.org)).

To get the Fox electronically, send your request, name, membership number (eight digit number on the address label of your Sierra magazine), and e-mail address to [editor@illinois.sierraclub.org](mailto:editor@illinois.sierraclub.org).

## Sierra Club Insider

Sign up to receive Sierra Club Insider, the flagship e-newsletter. Sent out twice a month, it features the Club's latest news and activities.

Subscribe and view recent editions at <http://www.sierraclub.org/insider>

## VOF Leadership

Terri Voitik and Charlie Zine	Co-Chairs
Fran Caffee	Vice-Chair/Water Sentinels
Julie Koivula	Secretary/Outings
Ron Bedard	Treasurer/Clean Air & Water

### Additional ExCom Members

Jan Mangers	
Terry Murray	
Gene Schultz	Political Chair
Jon Wesenberg	Renewable Energy
Craig Zabel	Publicity/Global Warming/ Sprawl Support Team

Marlene Bedard	Membership
Dudley Case	Past Chair
Ron Gilkerson	Dams
Mike Hanlon	WebMaster
Ted Penesis	PaddleBoat Fund Raiser
Nate Stelton	E-mail/Database
Marcel Wen	Mining

Newsletter	
Nate Stelton	Editor
Barb Vrchota and Fran Caffee	Editorial Consultants
Lisanne Freese	Layout and Design

All VOF Officers can be reached by using `firstname.lastname@illinois.sierraclub.org`, eg., [fran.caffee@illinois.sierraclub.org](mailto:fran.caffee@illinois.sierraclub.org). Check the website for updates at [www.sierraclub.org/il/vof](http://www.sierraclub.org/il/vof).

21st Century Fox is published quarterly by the Valley of the Fox Group of the Sierra Club. Send submissions and letters to the editor at [vf-news@illinois.sierraclub.org](mailto:vf-news@illinois.sierraclub.org). Please include your full name, address and, for letters to the editor, title and page number of story. Deadline for the next issue is May 1, 2008.



Red-tailed Hawk spotted at the last VOF Nelson Lake outing;

Photo by Nate Stelton.