

SEJournal

The Quarterly Publication of the Society of Environmental Journalists

Vol. 13 No. 2

Covering air pollution

The challenge of sorting through the complex law and bureaucracy

Editor's note: The air we breathe. What could be more basic? In this issue, the SEJournal has assembled some of the nation's leading reporters on air issues, with tips on turning those boring ozone stories into prize winners and graphing data from air-pollution monitors.

By MARK GROSSI

In the San Joaquin Valley, nobody needed to tip the local news media about the air quality problem.

In summertime, the brown haze almost leaves a bathtub ring on the surrounding mountain ranges. In winter, the suffocating, particle-laced fog hangs for weeks, like chronic bronchitis.

Air pollution was one of those topics that everyone in the valley complained about at soccer games and coffee breaks. Everyone knew a family with a child who carried an inhaler; one in six Fresno County children had asthma.

Yet, news reporters here were often stymied on this important story, mostly because it was cloaked in almost impenetrable jargon, science and politics.

You need to understand atmospheric chemistry, law and the three-headed bureaucratic monster involved in this story. Without preparation, this coverage will be filled with dead-ends and stumbling blocks.

Here's an example of what can happen:

A reporter attends the local air district meetings where he or she hears a discussion about new boiler controls or a requirement for electric forklifts for larger businesses.

After getting the translation on how significant it is to reduce nitrogen oxides by 0.04 tons per day, the reporters write a myopic story that is slashed and rightfully buried in the local section near the obituaries.

After a few more of those stories, even patient editors will often look elsewhere for stories to avoid getting another air-pollution headache.

Even when a reporter understands the jargon and the inside politics, it may be difficult to find a good news hook. Local air district officials, even when a reporter asks them to put the subject in English and give people a true perspective, can turn an interview into a confusing, 45-minute lecture on the Clean Air Act, one of the most complicated federal environmental laws ever written.

So even in the San Joaquin Valley, the air story was covered

(Continued on page 26)

More on covering air quality issues:

- Louisville's year of breathing dangerously p. 16
- Graphs yield otherwise hidden truths p. 11
- Many media miss this good air-quality story . . . p. 15
- "Last Gasp" series reaps rewards p. 26
- The Beat: Reporters cover summer air quality . . p. 33

Inside Story:

Lessons from newspaper's The Nature Conservancy probe

BY MIKE DUNNE

An environmental group gets a donation of land to save an endangered species – then drills an oil well on the property.

It buys an ecologically sensitive piece of land in New York for \$2.1 million – and then sells it for \$500,000 to the former chairman of a regional chapter, with some development restrictions. The transaction was just one of several similar deals designed to limit development by allowing well-connected buyers to construct homes in areas some want to preserve – while the buyers get a tax write-off, too.

Those are just two of the activities two reporters for *The Washington Post* found when they looked deeply into the activities of The Nature Conservancy, the "world's richest environmental group."

The three-day *Post* series looked at The Nature Conservancy's philosophy of "compatible development," a delicate juggling act between preservation and development, and its ability to tap corporate America's wealth for conservation. The series "describes The Nature Conservancy's transformation from a grassroots group to a corporate juggernaut," *The Post* says on its website displaying the series.

Reaction from both the Conservancy and elsewhere was quick. In mid-July, the U.S. Senate's Finance Committee asked the Conservancy for documents going back a decade on 18 broad topics. The Conservancy quickly reviewed many of the policies spotlighted in the article and admitted some changes already were in the works by the time the stories appeared.

(Continued on page 23)

SEJ and the world: Thinking outside the lines

By DAN FAGIN

Lines on a map can mean nothing, or they can mean everything. Any environmental journalist can tell you that.

We report on climate change, biodiversity, smog and so many other issues that don't recognize political borders. Yet we know from experience that political boundaries make all the difference in determining how people and governments respond to those issues. Why else would states as environmentally similar as Louisiana and Florida react so differently to the challenges of offshore oil drilling, or overfishing? Why else would Canada and the United States have such disparate attitudes about how to control the same acid rain?

So we spend our days struggling to reconcile global science with local politics, and helping our readers, viewers and listeners to do the same. Navigating those crosscurrents is always a challenge, but I think it's one of the reasons why so many reporters who stumble onto the environment beat quickly decide they never want to cover anything else. We never seem to get tired of swimming those currents again and again, and finding a new way across each time.

No wonder, then, that many of us who are active in the world's largest membership organization of environmental journalists – SEJ – have been spending a lot of time lately thinking, talking and occasionally arguing about the significance of borders.

Specifically, we've been reconsidering how best to serve SEJ's growing membership outside of the United States. How much do national boundaries matter in designing programs and services for environmental reporters? What are the similarities, and the differences, in the professional challenges environmental journalists face around the world? How can SEJ be more useful to our members outside of the United States?

It's a hot topic because in July the SEJ board of directors did something we've never done before: We had a board meeting outside of the United States.

Peter Fairley, SEJ's vice president for membership and a resident of Victoria, British Columbia, invited us to that beautiful city on Vancouver Island and arranged for us to meet with a group of Canadian environmental journalists. On the day we arrived, Peter organized a panel discussion at the University of Victoria, followed by a smaller brainstorming session in which about 25 reporters from both sides of the border pondered how to strengthen SEJ's outreach to Canadian journalists. The following day, we spent an hour at our board meeting talking about the same issue.

It's not exactly a new subject for SEJ, which has always been an internationally minded group. Jim Detjen and our other

founders wisely chose to keep words like "national" or "America" out of SEJ's name, and even the earliest SEJ conferences included internationally oriented panels and participants.

Today, a record 102 SEJers – about 8 percent of our current membership of 1,306 – live outside the United States. They're from 27 countries, from Australia to Zambia, and many make the long trip every year to attend our annual conference (we don't call it the "national" conference any more). Their presence always enriches the gathering.

As impressive as those numbers are, it's obvious that SEJ is still only reaching a small fraction of international environmental journalists who could benefit from our programs. Clearly, there's much more room to grow.

Yet SEJ's continued growth outside the United States also poses a dilemma for our organization, because some (though certainly not all) of the things that make SEJ especially useful to our U.S. members aren't very valuable to anyone else. The best examples of this are timely, newsy *TipSheet* items, *SEJournal* stories, listserv discussions, and conference panels about the latest and hottest issues in Washington, D.C. It would be wonderful if SEJ could provide equally specific help to reporters covering environmental policy fights in Bonn, or Bombay, but we have to be realistic about how much more we can do within the strict limits of our operating budget.

There's a second dilemma, as well, which is that our colleagues in other countries, especially in the developing world, don't always share some of the beliefs that many American journalists hold about how reporters should behave. For example, anyone who does public relations work or lobbying on environmental issues cannot be a member of SEJ under our eligibility rules. But in some countries it's quite common for talented reporters to also be activists or lobbyists.

I don't think many of us want to change SEJ's membership rules; they've played an essential role in defining what our organization is all about. But as our international membership grows, we will increasingly face situations in which we'll need to decide whether to at least slightly modify our North America-centric definition of "journalist" in order to accommodate a more pluralistic world, at the risk of alienating members who feel our membership rules have served the test of time and should be left alone.

For all of these international issues, then, the key question for SEJ is this: How can we be more inclusive of journalists abroad while staying financially solvent and remaining vital and relevant to the 92 percent of our members who live in the United States?

Canada is an obvious place to look for answers. If there's

(Continued on page 8)

Report from the Society's President



By
Dan
Fagin

SEJ Journal

SEJournal (ISSN: 1053-7082) is published quarterly by the **Society of Environmental Journalists**, P.O. Box 2492, Jenkintown, PA 19046. Membership \$40 per year (Canadian and Mexican journalists and students, \$30). Subscription fee \$50; \$30 library rate. © 2003 by the Society of Environmental Journalists.

Editor

Mike Mansur
Assistant Editor
Mike Dunne
Design Editor
Orna Izakson

Section Editors

BookShelf	Elizabeth Bluemink
From Academe	Jan Knight
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Science Survey	Cheryl Hogue
SEJ News	Chris Rigel
The Beat	Mike Dunne

Editorial Board

Mike Mansur, Kevin Carmody
A. Adam Glenn, JoAnn Valenti, Denny Wilkins

SEJournal will accept unsolicited manuscripts. Send story ideas, articles, news briefs, tips and letters to editor Mike Mansur, *Kansas City Star*, 1729 Grand Ave., Kansas City, MO 64108, mmansur@sej.org. To submit books for review, contact Elizabeth Bluemink, *The Anniston Star*, P.O. Box 189, Anniston, Ala., (256) 235-9284, ebluemink@annistonstar.com. To submit to The Beat, contact Mike Dunne, *Baton Rouge Advocate*, P.O. Box 588, Baton Rouge, La., 70821-0588, (225) 388-0301, mdunne@theadvocate.com.

For inquiries regarding the SEJ, please contact the SEJ office, P.O. Box 2492, Jenkintown, PA 19046 Ph: (215) 884-8174; Fax: (215) 884-8175; E-mail: sej@sej.org

The Society of Environmental Journalists (SEJ) is a non-profit, tax exempt, 501(c)3 organization. The mission of the organization is to advance public understanding of environmental issues by improving the quality, accuracy and visibility of environmental reporting. We envision an informed society through excellence in environmental journalism. As a network of journalists and academics, SEJ offers national and regional conferences, publications and online services. SEJ's membership of more than 1,300 includes journalists working for print and electronic media, educators, and students. Non-members are welcome to attend SEJ's national conferences and to subscribe to the quarterly SEJournal.

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SEJournal is printed on recycled paper

In This Issue

Cover

- **Air Pollution: Sorting through complex law and bureaucracy**
By Mark Grossi.....1
- **Inside Story: Lessons from newspaper's Nature Conservancy probe**
By Mike Dunne.....1
- **Fresno Bee's "Last Gasp" series reaps rewards**
By Mark Grossi.....26

Report from the Society's President

- **SEJ and the world: Thinking outside the lines**
By Dan Fagin.....2

Viewpoint

- **Environment writers need to consider the big picture**
By Cameron M. Burns.....4

SEJ News

- **Outstanding environmental journalism honored in SEJ annual awards**
By Tim Wheeler.....5
- **Stolberg winners: SEJ members win top volunteer prize.....5**
- **Tour highlights tribal environmental issues**
By Colleen Kaleda.....7

Issue in the News

- **Industry, regulators battle over new security measures at chemical plants**
By Margaret Kriz.....9

Science Survey

- **Serious health issue may lurk behind scientific duel**
By Bette Hileman.....10

Online Bits & Bytes

- **Graphs reveal otherwise hidden truths**
By Russell Clemings.....11

Research News Roundup

- **Weathercasters' views on climate change surprising, survey shows**
By Jan Knight.....12
- **Despite challenges, study finds the E-beat has matured**
By Sharon Friedman.....13

Reporter's ToolBox

- **Many media miss this good air-quality story**
By Steve Sauer.....15

Feature

- **Louisville's year of breathing dangerously**
By James Bruggers.....16

Book Shelf

- **"Enough: Staying Human in an Engineered Age" by Bill McKibben**
Reviewed by Robert Braile.....30
- **"Monkey Dancing: A Father, Two Kids and a Journey to the Ends of the Earth" by Daniel Glick**
Reviewed by Jim Motavalli.....30
- **"Ideas Into Words: Mastering the Craft of Science Writing" by Elise Hancock**
Reviewed by Jim Rossi.....31

The Beat

- **And The Beat goes on**
Compiled by Mike Dunne.....33

SEJournal submission deadlines

- Winter '03.....November 1, 2003
- Spring '04.....February 1, 2004
- Summer '04.....May 1, 2004
- Fall '04.....August 1, 2004

Environment writers need to consider the big picture

By CAMERON M. BURNS

The Society of Environmental Journalists' annual conference in New Orleans was scheduled for Sept. 10–14. But I'm not going this year.

Last fall, I attended the SEJ's annual conference in Baltimore. According to an article in the *SEJournal*, so did 846 other people.

In total, [at the 2002 annual conference] just three of my many activities — reading, listening to presenters, and flying to Baltimore — shoved roughly 2,245 pounds of carbon dioxide into the air.

"Baltimore conference tops all in attendance," stated the headline. "The number included 119 poster presenters, 150 single-session speakers, about 40 registered exhibitors, 25 fellowship winners and about 15 international attendees." And, the article said, 322 member and non-member journalists.

Big numbers usually mean good things; except when big numbers of people are churning through expensive and limited resources.

While I was there I had the opportunity to attend meetings, events and receptions in a variety of rooms at the Wyndham Inner Harbor Hotel, and I took some notes about them: "the Pratt Room (~35 feet X ~45 feet; curtains pulled closed; even the lights up against the windows are on — total: ~1,575 square feet);

the E.A. Poe Room (~25 feet X 35 feet — total: 875 square feet); the Hopkins Room (~22 X 45 feet — total: ~990 square feet); and the International Ballroom (~150 feet X 90 feet for main area and ~150 feet X 25 feet for side area — total: ~17,250 square feet)."

Upon returning to Rocky Mountain Institute, where I work as an editor, I decided to see what I had spent, so to speak, in terms of resources. I contacted Rick Heede, a former RMI researcher who is a world recognized expert on carbon emissions and climate change. Although he's now a freelance researcher and writer, he's been calculating carbon emissions for 20 years and he offered me some benchmark figures. (Of course, there are many possible variables to these numbers — which we could debate for several decades — so take them only as illustrative.)

A typical office building uses ten kilowatt-hours per square-foot per year, so, for a typical office building (which is occupied about 250 days of the year), the energy consumed by lighting is about 0.04 kilowatt-hours per square foot per day.

The total square footage in the rooms where I'd attended 3.5 days' worth of SEJ sessions was about 20,690 square feet (subtracting the full day out of the building for tours). Yet, I wasn't the only person using the light — for argument's sake we'll say

a third of the people (282) at the conference did (since I used a third of the rooms).

Running the numbers, one gets 2,896.6 kilowatt-hours of electricity. At Maryland's "carbon intensity" (the amount of carbon released when electricity is made), this means about 4,212 pounds of carbon dioxide (2,896.6 kilowatt-hours x 1.454 lbs carbon dioxide per kilowatt-hour (accounting for transmission and distribution and other losses)) was emitted by power plants burning fuels so 282 of us could see speakers and read literature for those 3.5 days. I alone therefore account for 15 pounds of carbon dioxide.

Yet that doesn't include all the other rooms conference-goers used, notably the Carroll Room, the Douglas Room, the Calhoun Room, the Preston Room, the D'Alesandro Room, the McKeldon Room, the Schaefer Room, the Liberty Ballroom Lobby, and the Liberty Ballroom B, the Promenade (which we used a *lot*), and a few others. Likewise, it doesn't include individual attendees' rooms or energy used in the hotel for heating, cooling, cooking, cleaning, dishwashing, showers, television sets, irons, hair dryers, laptops, elevators, computers, phones and security systems. Whew!

Now let's turn from the tiny electric light load in four rooms to a pretty big resource user: *travel*.

If you figure 0.647 pounds of carbon dioxide is emitted per airplane passenger-mile, then flying from Denver, roughly 1,640 miles, one way, I turned loose about 2,122 pounds of carbon dioxide. Likewise, that doesn't include taxi emissions and bus emissions (like most, I went on a day trip at the conference). And, of course, I picked up a lot of reading material, probably 40 pounds of it (we emit about 2.69 pounds of carbon dioxide per pound of paper we make), generating about 108 pounds of carbon dioxide.

In total, just three of my many activities (reading, listening to presenters and flying to Baltimore) shoved roughly 2,245 pounds of carbon dioxide into the air. Still with me?

There are the many other energy demands for a conference, like transportation for hotel employees and conference supplies (including food). Multiply my energy consumption by 846, and suddenly we're talking about some *really* big numbers.

Carbon dioxide and other so-called greenhouse gases are significant because they trap in the atmosphere heat that would otherwise radiate out into space (a phenomenon known as the greenhouse effect, and make life on earth impossible. Too much of the gas, though, can cause the earth to heat up — as it is currently doing.

Of course, these numbers on carbon dioxide emissions are rough, back-of-the-napkin estimates (and yes, feel free to email me with complaints and counterpoints), but they illustrate something more important: writers of environmental literature need to be leading the way out of the consumption conundrum.

There are "green," or resource efficient, venues out there, there are ways of meeting people without travel, there are methods for sharing discussions without sitting in oversized, overlit rooms, and there are learning opportunities close to home.

We need to ask how people get to conferences like the SEJ event, why they're held where they're held, if there are better ways for people to attend, if they can take different formats, if such

(Continued on page 32)

Outstanding environmental journalism of 2002-2003 honored in SEJ annual awards

By Tim Wheeler

The Society of Environmental Journalists announced winners and finalists in its second annual Awards for Reporting on the Environment on Wednesday, Sept. 10, at the society's annual conference in New Orleans.

Judges praised the 224 entries by reporters from throughout North America for their skill and imagination in treating a broad range of complex, often controversial environmental topics. Award-winners in nine categories of print, broadcast and on-line journalism covered subjects ranging from salmon farming to snowmobiling and scientific abuses in agribusiness. Their geographic span stretched from Florida's Everglades to Washington's Puget Sound, from Canada to Peru.

"What's astounded me in judging this category for two years has been the amount of great work going on at a really wide range of publications," said Randy Lee Loftis, veteran environmental reporter for *The Dallas Morning News* and chairman of the panel that judged in-depth print reporting.

The outstanding series he read from many small- and medium-circulation publications, he added, are "putting the lie to the notion that nobody's interested in quality anymore."

Other judges lauded various broadcast and on-line winners as "remarkable," "exemplary" and the "gold standard for serious reporters on the environmental beat."

Winning entries chosen by independent judging panels received \$1,000 and a trophy, while second- and third-place finishers received framed certificates. In all, 23 entries involving at least 33 journalists were honored for outstanding beat and in-depth reporting in print, radio and television, as well as for the best work on-line and in small media markets.

Winners, by category, were:

Beat Reporting – Print: Perry Beeman, *The Des Moines Register*



Called a "journalistic watchdog" by the judges for "enterprising and thorough investigative reports," Beeman wrote about under-funded environmental regulation and bacterial contamination at swimming beaches, but judges singled out his "groundbreaking" reporting on how Iowa's leading industry, agribusiness, tries to suppress scientific research critical of widespread antibiotic use in livestock.

Beat Reporting – Radio: Cheryl Colopy, KQED-FM, San Francisco

Judges said Colopy used her medium "to its fullest, with crisp storytelling and wonderful use of sound." Her compelling coverage included a mini-documentary on the environmental impact of salmon farming and a detective tale about tracking down the source of a mysterious oil leak.

Beat Reporting – TV: John Daley, KSL-TV, Salt Lake City
Daley's "willing to take on complex issues and gives them balanced coverage," the judges said. They praised him for tackling a broad range of topics, some of them rarely done on TV, and making them both "understandable and visually interesting."

In-Depth Reporting – Print: "The Swamp," by Michael Grunwald, *The Washington Post*

Judges called this series on the politically imperiled state-federal rescue plan for Florida's Everglades "painstakingly reported and written with great authority." Grunwald's work is a caution to other regions looking to the River of Grass as a model for ecosystem restoration, the panel concluded.

In-Depth Reporting – Radio: "The Rivers South," by Clay Scott, NPR's Living on Earth

(Continued next page)

SEJ's volunteer prize goes to Mentor Program coordinators

Orna Izakson and Dawn Stover, leaders of the Society of Environmental Journalism's growing Mentor Program, have been chosen as the 2003 recipients of the David Stolberg Award for outstanding volunteer service to SEJ.

Izakson and Stover "took SEJ's mentoring program to a new level of activity this year," said SEJ Director Beth Parke. The program pairs veteran environmental reporters with newcomers to the beat, or with less experienced reporters who want to improve their skills.

Begun in October 2001 as a pilot project, the Mentor Program formally kicked off last July, and now has 17 mentors and 22 "mentees" (for lack of a better word) signed up. Of those people, 11 mentors have been matched with mentees so far.

Mentors typically critique stories and offer advice to their mentees via e-mail, telephone or in person. They also get together at special mentoring events at SEJ's annual conferences.

Izakson and Stover were chosen from a field of nominees who had all given great service to SEJ in the past year, according to

Stolberg Award judge Tim Wheeler. Yet the judges agreed that the pair's leadership in expanding the all-volunteer Mentor Program clearly demonstrates the kind of commitment and selflessness that the Stolberg Award is intended to recognize, he added.

In addition to her mentoring work, Izakson has covered environmental issues for newspapers and magazines around the country since 1993. She lives near the Columbia River in Portland, Ore., where she is a freelancer and at work on a book about the Klamath Basin.

Stover works three days a week as the science editor of *Popular Science*. She joined the magazine in 1986, and since 1991 has been telecommuting from a log cabin near White Salmon, Wash. Also at work on a nonfiction book proposal, she focuses on the biological sciences, particularly ecology and biodiversity.

"These two richly deserve this award," said SEJ President Dan Fagin. "They are not only running a very important program

(Continued on page 22)



Awards... (from page 5)

An "excellent example of an audio voyage," the judges agreed. Scott's report takes listeners on a trek down two important and endangered rivers in the Southeast, the Chattahoochee and the Apalachicola. Along the way, inhabitants voice their love and concern for the waterways.

In-Depth Reporting – TV: "La Oroya, City of Lead," by Craig Cheatham, Mark Hadler and Andrea Torrance, KMOV-TV, St. Louis

The judges extolled the news crew's initiative and the station's commitment in this unusual report from abroad by a local TV news station — examining the harm being done to health and the environment in a small Peruvian town by a locally based company.

Online Reporting: "Florida's Springs: Protecting Nature's Gems," by Peter Lane Taylor, Russell Sparkman, Kevin Sparkman, Toby Malina and Tim Gasperak, FusionSpark Media

"Maximum exposure production," the judges declared, for presenting "sound explanatory journalism" while taking "full advantage of the online medium." In particular, they singled out the use of Flash animations to explain the source of Florida residents' water "in a way that words alone could not."

Small-Market Reporting – Broadcast: "Baldwin Park," by Sarah Bennett, KOZK-TV, Springfield, Mo.

"Rock-solid journalism," the judges said of this 30-minute documentary, in which Bennett did her own research, videography and production. The story examines how a town built a community park over what once was an illegal landfill, which still holds toxic wastes under a layer of dirt and sand.

Small-Market Reporting – Print: "Critical Mass," by Eric Frankowski and Bruce Plasket, *Longmont (Colo.) Daily Times Call*
 "An exemplary investigative series on nuclear contamination, an issue of national significance," the judges wrote, adding that it was marked by sophisticated reporting and "elegantly lucid writing that illuminated rather than fell prey to complexity."

Stories in the contest had to be published or aired between March 1, 2002, and Feb. 28, 2003.

The Society of Environmental Journalists, with more than 1,300 members, is the world's largest organization dedicated to reporting on the environment. The 13-year-old nonprofit organization eschews political or ideological stances in the often-contentious arena; its sole mission is to help journalists and their news organizations enhance the quality and prominence of reporting on environmental topics.

Judges for the contest were selected by an Awards Committee appointed by SEJ's board of directors. To avoid any conflicts of interest, committee members were barred from entering, while judges were not allowed to review any categories in which they had entered.

The judges included: Charles Alexander, recently retired environment editor, *Time* magazine; Rachel Ambrose, AP Radio; Eric Anderson, KPBS News; Emilia Askari, *Detroit Free Press*; Robert Braile, Institutes for Journalism and Natural Resources; Robert Calo, Graduate School of Journalism, University of California; Sharon Collins, CNN Headline News; John Dinges, School of

(Continued on page 22)



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Tour highlights tribal environmental issues

By COLLEEN KALEDA

In June, SEJ co-sponsored a two-day eco-tour with the Native American Journalists Association. The tour helped kick off NAJA's 19th annual convention at the Oneida Nation, just outside Green Bay, Wisc.. Patty Loew, a public television reporter and producer and University of Wisconsin professor, handled the logistics and planning of the June 17-18 eco-tour.

The first stop was the Forest County Potawatomi Reservation. En route, tribal elder Jim Thunder sat at the front of the bus and told the journalists stories – oral history, he noted, that wasn't in books. He told participants that Chicago – once a Potawatomi village – actually means “place of the skunk” in Potawatomi.

“In '80 we got paid for Chicago,” he said, cracking a smile. “By that time, we didn't want it back.”

Our first stop was to the tribe's Red Deer Ranch. Reporters rode on a flatbed full of hay bales pulled by a giant tractor. Bumping along the ranch roads, the journalists listened to Bruce Shepard, the ranch manager, talk about how the deer are raised for the tribe's smoked venison business. Photographers went literally “in the field” and snapped close-ups of the large, healthy deer. Chuck Quirnbach, a Wisconsin Public Radio Reporter and SEJ member, ventured close enough to place a microphone near where a deer munched on the grass.

Next on the itinerary was the tribe's EPA building, where staffers talked about the issues the tribe faces in its effort to earn the EPA's purest clean-air classification. A tribal member also talked about the problems in recent years in finding healthy birch trees for making traditional birch-bark canoes.

On the way to the next stop, the tour bus wound through the North Woods to the Sokaogon Chippewa Community near Mole Lake. There, reporters were treated to a traditional feast of fish and wild rice at the tribal EPA building.

Mole Lake tribal leaders Fran Van Zile and her husband, Fred Ackley, both spoke about the tribe's decades-long fight to fend off mining companies who want to cut into a nearby hill that is sacred to their tribe. Another key issue for the Mole Lake Sokaogon Chippewa is the decline of the wild rice in nearby lakes – including Rice Lake, where the eco-tour stopped next. A traditional food for Wisconsin Indians, the loss of the sensitive stocks to development and boating activity is drawing concern in this tribe and others across the state.

In the evening, reporters got settled in Keshena, Wisc., for the next day's activities at the Menominee Nation. At 234,000 acres, the Menominee is the largest Indian reservation in the state. Dinner conversation at the Menominee casino-hotel took the form of informal roundtable discussions on sustainable development, genetically modified foods and other topics.

The next morning, reporters visited the College of the Menominee Nation to get a primer on Menominee history and issues from Al Caldwell, director of the tribe's cultural institute. A highlight was the success story of the Menominee Forest, which covers 94 percent of the Menominee reservation. The forest, prized by the tribe, is a model of sustainable forestry.

“We don't cut any more out of this forest than it can grow in



NAJA participants interview Marshall Pecore (second from left), manager of the Menominee Forest.

a year's time,” Caldwell said.

The forest, containing 47 different tree species, has garnered the tribe national and international attention — even the attention of passing NASA satellites. According to tribal members, when viewed from space, the dense forest stands out so sharply against the developed land around it that NASA has told the tribe they sometimes use it to tweak their satellites.

After leaving the college, eco-tour participants donned hardhats and got a rare peek inside the tribe's working sawmill, which processes timber entirely from the Menominee Forest. Radio reporters enjoyed recording the ambient sounds here — the clanking of just-cut boards, the churning of a wood chipper and the thumps of heavy logs being rolled, sliced and lifted by machinery.

The last stop of the eco-tour was a short walk in the sustainable forest, where Marshall Pecore, the forest manager, answered last questions from the participants. The June sun filtered through the trees, a nice image to end the day. But the mosquitoes were fierce and for some, afternoon deadlines loomed. The tour ended with the drive back to Green Bay.

Colleen Kaleda is the media adviser for students at the University of Portland. She also writes freelance about the intersection of nature and culture for magazines.



Outside the lines... (from page 2)

any place other than the United States where SEJ has achieved a critical mass of members, enough to justify some brainstorming about special programs, it's Canada. Thanks to the tireless recruiting efforts of former SEJ board member Jacques Rivard and other Canada residents including Fairley and Toronto's Saul Chernos, we now have 53 Canadian members, far more than any other country except the U.S. (Third place is Australia, with 10 members; no other country has more than five.)

The key question for SEJ is this: How can we be more inclusive of journalists abroad while staying financially solvent and remaining vital and relevant to the 92 percent of our members who live in the U.S.? Canada is an obvious place to look for answers.

So that's why the SEJ Board was in Victoria in July: To try to find out what our Canadian members want from SEJ (and, admittedly, to do a little fly-fishing on the side). By the time the weekend was over, we hadn't caught many trout, but we had learned a lot from our Canadian members.

We learned that in their day-to-day professional lives, Canadian journalists face many of the same frustrations and challenges as those of us who work south of the border. Like us, they're feeling squeezed by newsroom cutbacks, a shrinking news hole and editorial pressure to shorten or sensationalize complex issues. Like many of SEJ's U.S. members, a growing number of Canadian reporters have discovered www.sej.org as a reporting resource and are eager for more training opportunities such as fellowships

and regional conferences – especially ones that bring U.S. and Canadian environmental journalists together to talk about issues that straddle the border.

But there are also some significant differences. Relatively few Canadian journalists cover the environment full time, and those who do are scattered across thousands of miles. Many of them aren't yet comfortable with the intensive networking and information sharing that is now second nature to many of SEJ's U.S. members. In addition, some of our Canadian members are turned off by the heavily U.S.-oriented content of *TipSheet*, the listservs and our conferences, and many feel that SEJ needs to strengthen its relationships with Canada-based journalism groups to avoid being tagged as an outsider.

In sum, we learned that Canadians – and, by inference, our other non-U.S. members – are enthusiastic about the kind of programs SEJ offers. But we also learned that they don't think the specific content of some of those programs is especially relevant

to them. As a member of our advisory board, the esteemed Canadian journalist Peter Desbarats, told us at our Victoria board meeting: Our success in Canada will depend on the relevance of our programs.

What, specifically, should we be doing in Canada? Here, too, we got a lot of ideas in Victoria, many of which we're already moving to implement.

SEJ's terrific web content manager, Cindy MacDonald (who lives in Ontario, by the way) has created a Canada page for our website, featuring links to lots of Canada-specific resources. A similar Mexico/Latin America page now is also available. Cindy is adding international events and resources to the home page, the useful links database and other parts of the website – take a look and you'll see.

We hope the Canada page, and a new SEJ-Canada listserv that Fairley has created, will be places where Canadian environmental reporters – and students and teachers, too – will get to know each other, share ideas and form networking relationships. Certainly the Internet is the best tool we have for bridging the huge distances that separate environmental journalists around the world. Our mentoring program, for example, has several applications pending from young reporters who live as far away as Ghana, Kenya, Malaysia and Palau (in the South Pacific), and we hope to match them soon with experienced reporters who will, no doubt, live thousands of miles away from them.

We're also increasing our efforts to strengthen our ties to key Canada-based journalism groups. We've already co-sponsored conference panels or events with the Canadian Association of Journalists, the Periodical Writers Association of Canada and the Canadian Journalists for Free Expression, and we're actively planning more events with CAJ and the Canadian Science Writers Association.

With the help of Desbarats and others, we're also beginning to look for opportunities to form relationships with Canadian and U.S. foundations and universities interested in facilitating cross-border conferences and other interchanges for environmental journalists. If we can find enough support, we hope that a Canadian city also will soon host SEJ's premier event, our annual conference.

And finally, our membership committee, led by Fairley, is considering various ways to make SEJ more attractive to non-U.S. journalists, including looking at our programs and membership policies. (For instance, Mexican and Canadian members already pay discounted dues that reflect the reduced buying power of their currencies.)

What we need now, more than anything else, are ideas from you. What *else* should we be doing to build an SEJ that recognizes this crucial reality of our beat: The issues we cover cross national boundaries, yet are profoundly influenced by them.

E-mail addresses and phone numbers for all of SEJ's board and staff members are listed on the SEJ website, so wherever you are – from Palau to Peoria – you won't have to cross any borders to share your ideas. Let us hear from you!

Industry and regulators battle over new security measures at chemical plants

By MARGARET KRIZ

In a Rose Garden ceremony in July 2002, President Bush unveiled his strategy for preventing terrorist attacks on American soil. Flanked by key lawmakers from both major parties, he announced plans to create a Department of Homeland Security and released a report identifying the federal agencies designated to protect particularly vulnerable industries. The Environmental Protection Agency's assignments included safeguarding the chemical industry and its hazardous materials.

"All of us agree," the president declared, "that protecting Americans from attack is our most urgent national priority, and that we must act on that priority."

In February, his administration specifically warned that terrorists "may attempt to launch conventional attacks against the U.S. nuclear/chemical industrial infrastructure to cause contamination, disruption and terror. Based on information, nuclear power plants and industrial chemical plants remain viable targets."

Despite the Bush administration's public promises and alarms, the White House has taken almost no action to improve security at any of the nation's 15,000 facilities — including chemical manufacturing plants, petroleum tank farms and pesticide companies — that contain large quantities of potentially deadly chemicals.

Some counter-terrorism experts shudder to think about the number of deaths an intentional release of a toxic chemical could cause. And the Bush administration's inertia heightens their worries.

"These chemical plants have a vulnerability which has a catastrophic characteristic ... that could approximate the World Trade Center," Rand Beers, White House counter-terrorism adviser for 30 years, said in a July interview. Dissatisfied with the Bush administration's approach to security, Beers resigned in March and now advises the presidential campaign of Sen. John Kerry, D-Mass.

Even though the EPA is the main federal regulatory agency with expertise in chemical safety, early this year the White House shifted responsibility for the chemical industry to the Homeland Security Department. That transfer occurred amidst industry complaints that the EPA, which was attempting to toughen federal security requirements, had become too demanding. Still struggling to get on its feet, Homeland Security has no authority to require the chemical industry to adopt stricter security measures. It also doesn't have the money or personnel to inspect industrial plants for potential security problems.

Thus, the Bush administration is relying solely on voluntary safety programs developed by chemical-industry trade associations. But even if every member of those associations faithfully abided by the voluntary guidelines, two-thirds of the facilities that use or store high volumes of toxic chemicals would still be unaccounted for because they don't belong to those groups, according to EPA officials.

The administration has given only half-hearted support to

legislative efforts to force the industry to make it less vulnerable. Since shortly after 9/11, Sen. Jon Corzine, D-N.J., whose state is dotted with facilities that use or manufacture vast quantities of hazardous chemicals, has been pushing legislation to require such companies to assess and improve their security. Corzine's bill would also mandate that companies consider using safer alternatives to their current practices for manufacturing and storing chemicals. During the previous Congress, the Senate Environment and Public Works Committee unanimously voted for the Corzine measure. But the proposal died on the Senate floor after the chemical industry fought hard to block it.

This year, the panel's new chairman, Sen. James Inhofe, R-Okla., is offering a less stringent chemical-industry security bill, which he wrote with the help of the Bush administration. The White House, however, has invested no political capital in getting it passed, and the bill has languished. Meanwhile, Rep. Joe Barton, R-Texas, who chairs the House Energy and Commerce subcommittee with jurisdiction over toxic chemicals, contends that new regulations aren't needed. "I don't see a burning need to legislate," Barton said.

EPA regulators have some idea of the scope of the problem. Under the Clean Air Act, every company that uses or stores extremely hazardous chemicals is required to file an annual report explaining the steps it's taking to prevent accidental releases of toxic chemicals and to protect the environment and nearby residents if a release does occur.

Based on reports from the 15,000 facilities required to submit that worst-case-scenario information, the EPA warned that a

Based on reports from the 15,000 facilities required to submit worst-case-scenario information, the EPA warned that a terrorist attack on any one of the 123 chemical facilities located in densely populated areas could expose 1 million people to toxic chemicals. An attack on one of 700 other facilities could threaten at least 100,000 people. And an attack at one of 3,000 other chemical sites could affect 10,000 people.

(Continued on page 19)

Serious health issue may lurk behind scientific duel

By **BETTE HILEMAN**

Baby bottles and cans found in kitchen pantries are at the center of a scientific debate over a chemical known as bisphenol A.

Like many such complex chemical controversies, journalists covering it are faced with a dilemma. Scientists on opposing sides of the issue, those who say it's probably dangerous and those who say it's safe, assess the scientific literature quite differently.

Bisphenol A, sometimes called BPA, is used to make polycarbonate plastic for clear baby bottles, large water bottles, dinnerware, shatterproof windows, cages for lab animals, electrical equipment and many types of machine parts. About 2 billion pounds of BPA are produced each year in the United States.

Nearly everyone is exposed to bisphenol A. Almost all metal and aluminum cans for food are lined with a BPA resin, and dental sealants and white tooth fillings are usually made of a bisphenol A resin. Some packaging for fast food contains the chemical, and some food containers, such as clear plastic storage containers designed to go from the freezer to the microwave, are made of BPA.

Scientists have known for many years that BPA is estrogenic – it mimics female sex hormones. But they did not think it posed a threat to humans. Not enough of the material, they thought, would leach from polycarbonate cages or water bottles to cause estrogenic effects in lab animals.

Estrogenic effects include enlarged prostate, increased weight of the uterus, early puberty and reduced sperm counts in offspring when pregnant rodents are given low doses of BPA. If similar effects were found to occur in humans at very low levels of exposure, it would be important to eliminate BPA from food containers and dental sealants.

In one camp on the BPA controversy are researchers such as Patricia A. Hunt, an associate professor of genetics at Case Western Reserve University, and Frederick vom Saal, a developmental biologist at the University of Missouri in Columbia. In recent work, Hunt exposed mice to very low levels of BPA — essentially the levels found in human blood. She found that these exposures induced increases in chromosomal aberrations in developing mice eggs. These chromosomal aberrations are important because, in human eggs, such abnormalities are the leading causes of miscarriage, mental retardation, and congenital defects such as Down syndrome.

On the other side are scientists, such as Rochelle W. Tyl, research director for reproductive and developmental toxicology at the Research Triangle Institute. She tested BPA on 8,000 rats and found no effects. She and some other scientists, such as Steven Hentges of the industry-sponsored American Plastics Council, claim her study and one other show that low doses of bisphenol A cause no harm.

But stacking up against those two studies are about 44 research projects that show harmful effects from low levels of BPA.

If the same processes occur in human eggs as in mouse eggs, Hunt's research is potentially highly important. "We don't know what the effects, if any, may be on humans at these low

levels, but a study in Germany indicates pregnant women are exposed to levels of BPA similar to those used in the mouse study," Hunt explained.

Humans are commonly exposed to levels of BPA only slightly lower than 20 parts per billion, the level used in Hunt's research. The German researchers recently found BPA levels of 2 to 12 parts per billion in human mothers' and fetal blood.

Hentges of the American Plastics Council marshals several arguments against Hunt's research. First, he says the scientific method Hunt used has not been validated by other labs. But no single research method has yet been validated or standardized for the study of endocrine (hormone) disruption.

In 1996, the federal government convened the Endocrine Disrupter Screening and Testing Advisory Committee to work out methods for testing chemicals for hormonal effects. In 1998, the panel presented its final report. Various research groups are now going through the process of validating the methods devised by this committee. Hunt's method is not included because at the time the committee issued its report, no one realized that endocrine disrupters could cause chromosomal aberrations.

Hentges also claims that the relevance of Hunt's work to human health has not been established. That is true. But the maturation processes in mouse eggs may differ only slightly from those in human eggs. These processes are very similar in all mammals, said John Eppig, senior staff scientist at the Jackson Laboratory, a mammalian genetic research facility in Bar Harbor, Me. Human and mouse eggs, Eppig said, go through almost identical processes of maturation.

Finally, Hentges says two large studies show BPA has no harmful effects. He refers particularly to Tyl's study. In this research with 8,000 Sprague-Dawley rats, the animals were given a diet that produced blood levels of BPA ranging from lower than those tested by Hunt to at least 1,000 times higher. Tyl found no evidence of reproductive or developmental effects. Hentges claims that because of the sheer size of Tyl's study, it trumps all research that found harmful effects.

But there are reasons to question Tyl's study. First, she used a strain of rat — the Sprague-Dawley — that has been shown in several published studies to be almost totally "insensitive" to BPA. When BPA is given to a female Sprague-Dawley rat, it binds to chemical receptors in the vagina but causes no effect on the organ. In all other strains of lab rats, vaginas respond to BPA.

The National Toxicology Program, part of the federal Department of Health and Human Services, advises researchers not to choose a lab animal that is known to be insensitive to the test chemical.

Second, Tyl did not use what researchers call a "positive control" in her research. In other words, she did not give the rats a known strongly estrogenic chemical, such as diethylstilbestrol (DES), to see if they respond to it under the same experimental conditions. Positive controls are employed in nearly all laboratory tests used to determine whether a chemical disrupts hormones.

(Continued on page 29)



Using spreadsheets

Graphs reveal otherwise hidden truths

By **RUSS CLEMINGS**

(Final installment of two parts)

In the first part of this exercise, we imported air pollution data into Excel 2000, isolated readings for one monitor, manipulated dates, then used the Pivot Table Wizard to show that carbon monoxide readings are highest in winter.

This time, we will show how using Excel to create graphs can help us spot long-term trends that are not readily apparent from the raw data.

Start by opening the Excel file that we saved at the end of the last lesson and click on the "Sheet1" tab at the bottom of the screen. This file has daily readings for 23 different air pollution parameters from 1990 to 2000 for an air pollution monitor in Clovis, Calif., about two miles from the modest but comfortable Clemings estate.

This time, instead of carbon monoxide, we will examine trends for the region's most serious pollutant — ozone. Two columns in this file (columns "S" and "T") contain ozone readings. The first, labeled OZMAX1HR, has the highest ozone reading for any one-hour period in each day. The second, OZMAX8HR, has the same data averaged over eight hours rather than one hour. Both are important because they measure, respectively, short-term and long-term exposures to this troublesome pollutant.

One question that might be asked about this data is whether ozone levels by either measure are rising, falling or remaining steady. But it's almost impossible to answer that question just by scanning the data. It's just a jumble of numbers. Even if you examined the entire file from top to bottom, it would be impossible to figure out the trend.

You can use the Excel Chart Wizard to create a line graph for the date and one-hour ozone levels. To create the chart, first make a copy of the sheet by going to the Menu Bar and clicking on "Edit," "Move or Copy Sheet," "Create a Copy" and "OK."

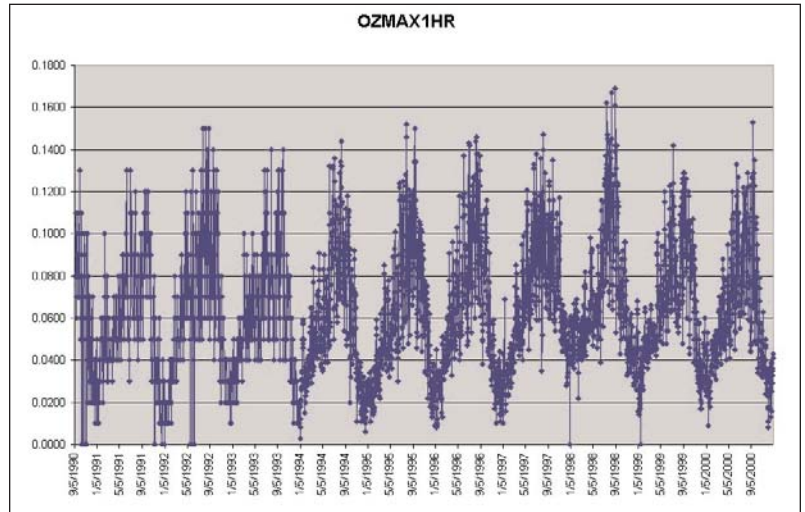
Now, let's delete some columns. We'll need the dates, which are in column "F," and the one-hour ozone data, which is in columns "S," but we can delete everything in between. Click on the letter "G" at the top of column "G," then hold down the "Shift" key and use the right arrow to select all of the columns from "G" to "R." Click on "Edit" and "Delete" to get rid of those columns.

Now place the cursor in cell F1, hold down the "Shift" key and use the right arrow and "Page Down" keys to define a block from F1 to G3768. This is the data we will be using in the graph. Go to the very top of the screen and click on the "Chart Wizard" icon, which looks like a 3-D chart with columns of blue, yellow and red. If the icon is not visible, go to the menu bar and click on "View," "Toolbars" and "Standard," and it should pop right up.

After you click the "Chart Wizard" icon, click on "Line" under "Chart Type," then click "Next" three times. Then, in step 4 of the Chart Wizard, click "As new sheet," followed by "Finish." Your chart will appear on a new worksheet.

If you eyeball this graph, it looks as if the summertime peaks are edging upward. But it's hard to say for sure. Besides, it's not

just the peaks that we're worried about. There are a whole lot of values in the middle of this chart that are high enough to cause problems for the most sensitive people, and it's not at all clear



Plotting daily ozone peaks produces a confusing graph

which way those values are going.

What we need is a way to boil down these peaks and valleys to a long-term trend.

Here's one way to do that: A 365-day (or annual) moving average. It's not too hard to explain — for each day, it's just the average of the past year's daily values. That's why it's called a "moving" average. If today is June 5, 2003, then the 365-day moving average for today is the average of all daily values from June 6, 2002, through today. Tomorrow's 365-day moving average, in turn, would be the average of daily values from June 7, 2002, through June 6, 2003.

Here's how you write a formula to get that from Excel. First, go back to your data sheet — it's probably called "Sheet1 (2)" — and insert a new column by placing your cursor on cell H1 and clicking "Insert" and "Columns." Then give the new column a name in cell H1, such as "OZAVG."

We can't compute the 365-day average until we have 365 days of data, so scroll down to the 365th day (which is in row 366; since row 1 has the column names) and type this formula: =AVERAGE(G2:G366). Hit return. Then select that cell (Ctrl-C or "Edit/Copy") and, while holding down the "Shift" key, use "Page Down" to select the rest of the column, followed by Ctrl-V or "Edit/Paste" to copy the formula down to the bottom.

Now, let's go back to the chart (Chart1) and update it. First, right-click anywhere in a blank area of the chart and click "Source Data," then click on the "Series" tab. Go to the box labeled "Name" and replace what's there with a label for our new line, such as "Ozone average." Then, in the box labeled "Values," carefully edit the cell addresses so that they refer to \$H\$366:\$H\$3768 instead of \$G\$2:\$G\$3768. Click OK.

(Continued on page 28)



Research News Roundup

Weathercasters' views on climate change surprising, survey shows

By JAN KNIGHT

Weathercasters vary greatly in their knowledge of climate change, no matter their educational background, meteorological training, market size or employee rank, such as prime-time meteorologist or weekend weather anchor, according to a recent survey of more than 200 television weathercasters.

Rather, statistical tests suggest that the variation is directly correlated to weathercasters' attitudes and beliefs — that is, to their "politics," according to the University of Texas at Austin

School of Journalism researcher who conducted the survey.

Each of the 217 weathercasters surveyed were familiar with the term global warming, but the researcher found that:

- Although 80 percent of weathercasters correctly identified carbon dioxide as a greenhouse gas, fewer recognized other greenhouse emissions: 63 percent correctly identified methane, 56 percent correctly identified CFCs and only 22 percent correctly identified nitrous oxide as greenhouse gases.

- Nearly 90 percent of weathercasters knew about sources of carbon dioxide, such as auto emissions and deforestation, but only 25

percent knew that landfills and only 13 percent knew that rice agriculture are associated with methane. Only 47 percent knew that air conditioner leaks were related to the release of CFCs.

- More than 70 percent of weathercasters knew that scientists have reached consensus about predicted increases in global temperatures, but only about one-third of them knew that models consistently predict increasing global cloud cover and global precipitation with a doubling of greenhouse gases.

"These statistics are startling," the researcher wrote, "given that all atmospheric models agree on these predictions and they represent basic atmospheric science that weathercasters work with daily. In a warmer world, more evaporation will occur, which will increase cloud cover, which will lead to more global precipitation. This is basic meteorology, yet apparently misunderstood by two-thirds of these weathercasters."

- Only 22 percent of weathercasters knew that most atmospheric scientists accept the theory of global warming, while 58 percent thought the topic was still strongly debated.

- Only one-third knew that variations in weather are becoming increasingly common, a statement supported by findings of the Intergovernmental Panel on Climate Change in 2001.

- Fifty-three percent of the weathercasters accurately disagreed that local weather variations are a result of global warming, but 9 percent agreed, ascribing local effects not yet linked to climate change, and 38 percent said they didn't know whether global warming had any impact on local weather patterns.

The variation in the weathercasters' knowledge was surprising, the researcher explained, for one reason because they indicated that they relied on scientific journals and scientists as information sources, unlike a previous survey showing that environment reporters rely most on newspapers for their climate change knowledge.

The survey results show that the political aspects of climate change are not easily separated from the science of it, concluded the researcher, a former TV weathercaster. Among those surveyed, he wrote, widespread ignorance and misinformation of basic climate change exists, and much of it can be linked to weathercasters' values and beliefs, which he measured using a series of "Likert questions" typical of many surveys: He asked weathercasters to rank their responses to statements such as, "Climate change is a serious environmental issue" (75 percent agreed) and "Weathercasts are the proper place to educate about environmental issues such as climate change" (40 percent agreed, 30 percent disagreed and 28 percent felt neutral).

Additionally, the political views of station managers and owners might come into play, the researcher suggested. One major market weathercaster, who spoke on condition of anonymity, told the researcher that the group owner forbids the use of the term global warming on any of their newscasts, while at the Weather Channel, meteorologists are encouraged "not to talk about it" because it would put the channel into a "very difficult political situation."

For more information, see "Forecasting the Future: How Television Weathercasters' Attitudes and Beliefs About Climate Change Affect Their Cognitive Knowledge on the Science" by Kris M. Wilson in *Science Communication*, December 2002; also available at <http://journalism.utexas.edu/faculty/wilson.html> — scroll down and double-click on "links."

News agency coverage of sustainable development reflects materialism, lacks focus on poverty, social concerns, study shows

International news agency coverage of sustainable development tends to present environmental protection as dependent on economic growth, a recent study shows.

Additionally, The Associated Press (AP) is more likely than another international news agency — the Inter Press Service (IPS) — to cite representatives of wealthy nations when reporting on sustainable development, according to an analysis of news coverage spanning 10 years.

The study, conducted by two University of Texas at Austin researchers, focused on the AP because it is a primary provider of international news in the United States and the world, so holds a potentially powerful role in influencing public opinion and poli-

(Continued on page 18)

One major-market weathercaster told researchers that the group owner forbids the use of the term global warming on any of their newscasts, while at the Weather Channel, meteorologists are encouraged "not to talk about it" because it would put the channel into a "very difficult political situation."

Despite challenges, study finds the E-beat has matured

By SHARON M. FRIEDMAN

In 1990, I wrote an essay about the first two decades of environmental journalism in the United States and I was not too optimistic about how this specialty would progress as the years went on. Comparing the environmental reporting of the 1970s and the 1980s, I saw many similarities and not much progress in the quality of the reporting. I criticized it for its focus on event reporting of environmental disasters without looking at root causes. In particular, I singled out its lack of depth and context that confused readers and viewers about the environmental health risks they heard trumpeted in the media.

Asked to dissect the third decade of environmental journalism in the United States for an upcoming book, I took a qualitative approach and sent a list of questions by e-mail to 16 experienced environmental journalists who are former or present SEJ Board members as well as two former journalists who are long-time observers of the field. Twelve, representing all media, responded. While 12 people are in no way representative of all full- or part-time U.S. environmental journalists, their long years of experience give them a perspective that is highly knowledgeable and insightful about what happened from 1990-2002. Since I promised them confidentiality, individual comments will not be attributed to a particular journalist. My thanks to all of the reporters for their assistance.

To summarize the main points they made, environmental journalism, like many other journalism specialties, faced a shrinking news hole from 1994 on, brought about by centralization of media ownership, revenue losses and challenges from new media. Despite that, as practiced by full-time specialty reporters, environmental journalism matured as stories changed from relatively simple event-driven pollution stories to those of far greater scope and complexity. There was a need to tell longer, complicated and more in-depth stories. Environmental journalism became more sophisticated with the help of the Internet and the Society of Environmental Journalists.

The news hole and the environmental beat from 1990-2002

The environmental beat has never been stable: It rides cycles of public interest, events and economic conditions. During much of the 1980s, environmental coverage had been in the doldrums, but in 1988, it began to grow when a severe drought and summer heat wave led to a resurgence of public interest in and media attention on the environment. This spate of greatly increased media environmental attention continued for about five years.

After this high point, environmental journalism cycled downward as both the number of environmental reporters and the news hole began to decline. Faced with economic downturns and media consolidation, some editors saw the opportunity to pare their staffs by assigning environmental stories to general assignment reporters or asking environmental reporters to cover other topics. There were numerous reports of declining column inches. Television news dropped from an environmental coverage peak on the three national networks of 774 minutes in 1989, the year of the Exxon Valdez oil spill, to a low for the decade of 122 minutes in 1994. For the next few years, the range of minutes devoted

on the three major networks to environmental issues ranged from 174 minutes in 1996 to 280 in 2000.

In the new millennium, George W. Bush's early anti-environmental moves brought environmental issues back to the front pages of major newspapers (Hall, 2001). Network television coverage also increased, with 617 minutes of environmental coverage for 2001 on the three major networks. This increasing news hole trend continued until September 11, 2001, when its size dropped precipitously, as it did for many other journalism specialties.

Reflecting on the coverage cycle over the decade, the environmental journalists interviewed were unanimous that the news hole at some publications and most broadcast stations has decreased overall. "There are fewer resources for enterprise stories and few are the media at which environment is a 'cherished beat,' one likely to generate lots of page-one/above-the-fold possibilities," said one. Another pointed out that page one is difficult to achieve and there is more competition for it, although good stories still regularly make it.

But some reporters did not see the impact of the shrinking news hole as dire. One explained that early in the decade, environmental journalists had a "bubble" with dedicated environmental sections in newspapers that were not sustainable. "There really wasn't any way to fill all of the space we got, in many cases," he said.

Another reporter said his news hole has actually increased during the decade, but that "the perception of the environmental story being a trendy or a unique feature is pretty much gone." A third journalist explained that while all news holes have shrunk in newspapers, good compelling stories are given the room they need.

Changes in complexity and the range of stories

Coping with complexity was a major challenge for environmental journalists during the decade, and it continues to be so today. As these complexities became more apparent, the job got more difficult over the years, said one reporter. Confronting the complexity required more substantial research and more points of view in stories, another added.

According to one environmental journalist: "...The obvious stories gave way to more complex issues like particulate air pollution, climate change, endocrine disruption, and non-point source water pollution. The challenge grew to find the big stories, the big issues and to explain them thoroughly within space and time constraints."

In the last half of the decade, some journalists turned more frequently to long-term investigative projects, which required them to dig deeply into issues, not only sorting through historical records and other data, but also to talk to epidemiologists, toxicologists and other scientists. Said a senior reporter, "Journalists needed to know enough science to ask the right questions." As the issues became wider, the background knowledge required — already especially large for environmental reporters — expanded even more, another pointed out.

All 12 environmental journalists maintained that the range of topics today is not only more complex but also broader than in the early 1990s. They offered a variety of reasons why this expansion had occurred.

(Continued next page)

Beat matures... (from page 13)

Said one: "There's a growing realization that the environment is more than just pollution and critters." Instead, environmental journalists are now covering wide-ranging issues such as land management, sustainability, overfishing, invasive species, energy efficiency, farm practices and suburban sprawl.

Other reporters saw the expansion as part of a focus on new topics such as biotechnology and genetically modified organisms. At the start of the 1990s, one pointed out, "I did not envision covering biotechnology, and then ultimately bioterrorism and biowarfare. Everything from transgenic crops to anthrax to even West Nile virus all are now part of the environmental beat."

Another reporter said that readers and editors are more sophisticated about environmental issues and they are "demanding clearer presentations of risk and strong feature articles that can convey complex issues in a more compelling way than the standard news approach."

Some of the reporters, however, still felt there was too much pollution-oriented reporting, scant coverage of social issues embedded in environmental stories and little coverage of the special roles and privileges of corporations as well as the changing role of the judicial system regarding protecting the environment.

Other changes in environmental reporting

Many other important changes occurred in environmental journalism during the 12 years from 1990 to 2002. Here is a brief review of some that both the environmental journalists and I thought were important.

The environmental reporters said they are using a larger number and a wider range of sources today than in the early 1990s. According to one reporter, there is much more skepticism about the assertions of environmental groups and a greater willingness to include opposing views. Reporters are also doing a better job in critically examining what sources say, he noted.

More major enterprise and investigative stories are appearing in the largest 25 newspapers, but there are fewer big series in mid-size and smaller newspapers, one reporter noted. Two others worried that such stories are an "endangered species at too many news outlets..." Another said this would challenge journalists who want to do environmental investigative or enterprise stories to tell these stories in "fresh, compelling ways that don't sound like they've been done a million times before."

Local issues were the main focus for stories throughout the decade and even more so toward its end and into the new millennium.

Use of graphics increased during the 1990s, which helped sell stories to editors and readers.

Editorial support for environmental journalism remains strong at many newspapers but increased pressure to trim newsroom budgets is eroding that support, according to some of the reporters. Those editors who are still committed to environmental journalism are doing it better, said one.

The Internet and the World Wide Web have catalyzed many of the changes related to source use and more information resources. One reporter called the Internet "the single most significant change of the last decade," making it much easier to find a broad range of voices for stories and to get background materi-

al quickly and efficiently. Several others said they did not know how they once functioned without the Internet. Despite this high praise the reporters were aware of many of the problems involved in using the Internet and almost all said they preferred not to interview sources by e-mail.

There is little use of computer-assisted reporting (CAR) and geographic information systems (GIS) technology to develop information for daily news stories. One reason, according to several reporters, is the time needed to collect or build and then analyze datasets. Instead, it is used for enterprise or investigative pieces.

Most of the reporters considered the SEJ a prime factor in helping environmental reporters become better informed because of the multitude of information sources it provides, particularly through its website, its tipsheets and its listing of daily environmental articles.

Challenges ahead

As always, challenges lie ahead for environmental journalism in the next few years. One is the loss of information and databases from government sources, a trend that began even before September 11, 2001, but has escalated since then. Of concern too is a move in Congress to limit the types of government information subject to disclosure under the Freedom of Information Act.

Selling stories to editors and news directors to get around a shrinking news hole is also a formidable challenge. It's a constant balancing act to provide numerous points of view, explanations, background and context when the news hole is shrinking, explained one journalist. Yet, he said, the best environmental reporters "can hold the TV generation's attention with clear narrative writing and contextual reporting that emphasizes impacts on readers while still depicting the inevitable subtleties and uncertainties of the issues involved."

Led by a core of experienced, mature environmental reporters, the third decade of environmental journalism has been an exciting one. During these years, a relatively new field left its teenage years behind and grew into young adulthood. Like a fine wine, this field is aging well, becoming much more impressive than it was in the 1970s and 1980s, even in the face of significant economic constraints on media organizations.

Sharon Friedman is professor and director of the Science and Environmental Writing Program at the Department of Journalism and Communication, Lehigh University.

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Many media miss this good air-quality story

By STEVE SAUER

On the very day they moved into their suburban Detroit home, Pamela Walker and her two young daughters began experiencing sinus conditions and choking. Before their ordeal was over — a mere 24 days in the house — her 7-year-old daughter Melina would nearly die from mold-triggered asthma. Even service technicians who came to the home would leave breaking out in hives.

After three weeks, tests revealed a strain of mold in the home called *Stachybotrys*. The family had to move out immediately, leaving half their possessions behind — including children's toys and a treasured book collection. To this day, health effects linger.

This story, one of my first on the topic, is the type of tale I cover full time as associate editor of *Indoor Environment Connections*, the only newspaper serving the indoor air quality marketplace.

Experiences like Pamela Walker's are common. Yet this story that affects potentially millions of Americans is largely being missed by much of the mainstream news media.

These compelling stories can pull in readers, viewers and listeners. They affect everyone from day laborers to celebrities including Ed McMahon, Ted Nugent and Michael Jordan.

It's a story that involves health, legal liability — and money. There's a lot of dough being made from mold. A Texas couple, whose mansion was contaminated, for example, won a \$32 million judgment; later it was reduced to \$4 million.

Why have mold and indoor air quality become such a problem in recent years? Many experts say it's at least partially due to changes in building design and construction methods.

Says George Benda, CEO of the consulting firm Chelsea Group Ltd.:

"There is a growing disconnect among designs, materials and construction practices. The pressure to reduce costs is so enormous it often drives decisions and changes during a project that increase the risk of water intrusion. . . . Moisture problems are frequently built into buildings today."

Generally, the longer mold sits untreated, the tougher it is to remove — and the higher the payoff in a subsequent lawsuit.

Most insurance companies have recently started limiting their liability for mold damage.

A caution: One of the things that stands out today when I re-read my early article on Pamela Walker is the phrase "toxic mold." I used it in the story 10 times, when really this is a misleading phrase. Researchers are working on connecting the mold and human disease; some are con-

vinced they already have. Ultimately, the decision about whether the link has been established lies with insurance companies and in the courts.

Lawmakers across the country have tried to address the issue. In Congress, the U.S. Toxic Mold Safety and Protection Act was introduced each of the past two years (H.R. 5040 in 2002, H.R. 1268 in 2003). It seeks to establish national standards on indoor mold. However, health officials say that's a futile task; since exposure to mold affects individuals differently, they say there can be no universal exposure limit.

State legislation, however, is beginning to address some aspects of indoor air quality. This year, more than half of the 50 states have considered legislation related to mold and other indoor air quality issues — more than 60 bills altogether, according to a recent article at http://www.aerias.org/news_article.asp?article=774 detailing this first wave of legislation.

As a result of legislation, Texas and Louisiana are implementing programs this year that will require mold remediation companies to be licensed before they can practice in the state. Before any state-mandated licensing existed, the IAQ marketplace has for years relied on respected certification programs to set apart qualified individuals from fly-by-night money-makers. These organizations publish and refer to valuable technical information for IAQ professionals to read in order to maintain their certifications.

These include the Indoor Air Quality Association (www.iaqa.org or 301-231-8388), the American Indoor Air Quality Council (www.iaqcouncil.org or 800-942-0832), the Institute of Inspection, Cleaning and Restoration Certification (www.iicrc.org or 360-693-5675) and the Association of Specialists in Cleaning and Restoration (www.ascr.org or 800-272-7012).

Of the many complex implications of mold and other indoor air quality issues, perhaps the closest to home is the possible impact on human health. Remember all the other implications too: homeowners' insurance, consumer protection against unlicensed remediators, forthcoming legislation, lucrative court decisions.

Remember also that schools — and kids — seem particularly

hard-hit. There are a lot of issues related to indoor air quality all worthy of writing — and take it from me, there's enough going on constantly to fill the 48 pages of my newspaper each and every month.

Steve Sauer is associate editor of Indoor Environment Connections, the only newspaper serving the indoor air quality marketplace.



Indoor air quality information

www.epa.gov/iaq is where the U.S. Environmental Protection Agency stores online information about various indoor air problems and the agency's responses through public service announcements and programs.

www.ieconnections.com is the website for *Indoor Environment Connections*, an independent trade newspaper providing the various IAQ professions with the latest news and technical information. Technical articles dating back to 1999 are archived on the website.

www.aerias.org is an online resource that provides the latest news and comprehensive information on indoor environmental quality and its impact on human health. The company sponsors a national symposium each year.

www.chelsea-grp.com is the website for Chelsea Group Ltd., an indoor air quality consulting company whose goal is to make buildings work and to improve indoor air quality products.

Louisville's year of breathing dangerously

By JAMES BRUGGERS

It's one thing to tap into the U.S. Environmental Protection Agency's Toxics Release Inventory to identify the sources and quantities of pollution in a community. But it's another thing — much more difficult, in fact — to determine what chemicals that

what the government considered safe. Some of the higher readings were at an elementary school.

The newspaper's analysis suggested toxic air could cause two to 24 additional cancer cases among 10,000 people in Louisville.

I had been planning an air pollution project for several months, starting last fall. Then at the start of this year, I focused more directly on the project, cultivating additional sources within industry and collecting as much information from government websites as I could about Louisville-area industrial plants and the pollutants they emit.

As it turned out, getting to the finish line with a project named "Toxic Air: Lingering Health Menace" and a headline of "Chemicals exceed levels seen as safe" required, first and foremost, expert data crunching by Mark Schaver, computer-assisted reporting director at *The Courier-Journal*. It also took hours of conversations on the phone and in person with environmental experts, including one former Kentucky state regulator, a University of Louisville toxicologist and several out of state experts with credentials that matched my needs: environmental statistics, risk assessment and toxicology.

This included special assistance from Mitchell Small, an environmental engineering professor and expert in the mathematical modeling of environmental quality at Carnegie Mellon University in Pittsburgh. He's also an EPA adviser.

Before I go on, let me take a step back.

Since I arrived in Louisville in December 1999 from California, the editors at *The Courier-Journal* have wanted me to do a story about Rubbertown, a complex of about 11 chemical plants that came into its own during World War II as a source of synthetic rubber for the war effort.

While emissions are considerably less than they were during the 1940s, 1950s and 1960s, the plants still pump out several million pounds of pollutants every year. Other operations in the area, including three coal-fired power stations, a rail yard, freeway and sewage treatment plant, also contribute to the pollution.

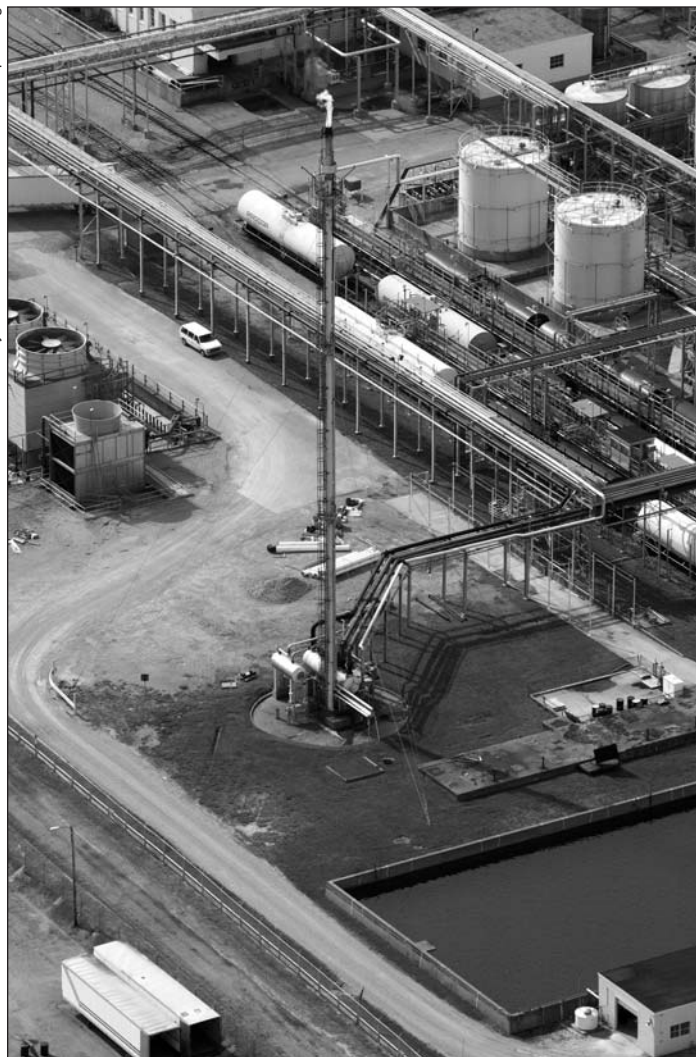
In other words, this is an industrial area, and over the years nearby residential areas have become largely populated by African Americans who have raised environmental justice concerns. Some residents have long complained that industrial pollution was making them sick.

After two government studies in the 1990s that explored health links to the pollution in the Rubbertown area were inconclusive, local officials working through a coalition of government, citizen and industry representatives decided to conduct air sampling of toxic chemicals and compounds.

The coalition, called the West Jefferson County Community Task Force, worked with local air regulators, the EPA and the University of Louisville's Institute for the Environment and Sustainable Development and began monitoring air quality at 13 sites in late 1999. From the beginning, the EPA told local officials to keep the sampling results secret until a final report could be issued, years later. (In fact, the final report still hasn't been released as of June 12). But University of Louisville officials opted to post data they had collected

(Continued next page)

Photo courtesy of THE COURIER-JOURNAL/Pam Spaulding



American Synthetic Rubber Co. is the largest industrial emitter of butadiene in the Louisville area.

people are breathing in their neighborhoods, and whether what's in the air poses a health risk.

I was given the rare opportunity earlier this year to do just that for the Louisville area when some air pollution sampling data arrived in my e-mail inbox.

Along the way, I found that I didn't have to rely on government officials and consultants to interpret this kind of environmental data. This was in large part because my editors had patience and were willing to engage in highly technical subject matter, and also because I was able to find solid, independent expert sources.

On May 12, 2003, the centerpiece article on Page One of *The Courier-Journal* told readers in the Louisville metro area that the air they were breathing contained 18 toxic chemicals or compounds at concentrations that were up to 2,400 times higher than

(about half, with the EPA holding tight to the sampling results it was analyzing) on its website.

I mention this because I wrote a story on these very preliminary results back in 2000. It was sketchy, but hinted at air quality problems. That first story also kept the issue alive, and whetted my editors' appetite for more. Which brings me to January 2003, the start of the year in which I was finally going to get around to a Rubbertown project.

By then, the official air monitoring period (May 2000 to May 2001) for a formal assessment of risk in Louisville had now been over for nearly two years.

The data were in the hands of an environmental consulting firm that specializes in assessing human risk from pollution. And the community was waiting for a draft report from these consultants that would answer the question: How risky is it to breathe Louisville air?

At first it looked like I was going to get the draft report as an exclusive. So we planned a project around its release.

But subsequently I was told industry didn't want the draft released, and I later found out that the EPA also wanted to keep it out of the public eye while various scientists, industry representatives, government officials and even a few citizens reviewed it.

Then I heard that the Louisville Metro Air Pollution Control District, a public agency involved in the study, had copies of the complete set of monitoring data, and that all the reviewing parties had signed off on it. In other words, the reviewers had agreed that the consultants had assembled and correctly summarized the results for each of 13 monitoring sites.

So I filed an open records request asking for the data. Amazingly, about a week later, it arrived in my e-mail, already in Microsoft Excel format. Now the real journey to the headline began.

With the data in hand I realized that despite my experience covering the environment, I had stepped into a foreign country that used a different language than I, my editors and most of *The Courier-Journal's* readers did. For instance, the term "95 percent upper confidence limit" showed up and I had to figure out how to explain it.

In technospeak, the statisticians would describe it as the upper bound of the "true average" of all sampling results at a given monitor. It's a way to take the sampling results at each monitor — up to 31 of them — and project a maximum exposure over many decades. We just called it maximum projected exposure.

Why do risk assessors focus on the 95 percent upper confidence limit?

The answer: The EPA uses it as a benchmark to make especially protective assumptions about the risk from exposure to environmental contaminants.

Industry, by the way, had argued successfully for the data to also include median and average concentrations for each of the monitoring sites. They believed this was more reflective of reality.

In addition, I found that I was entering a public policy and scientific nether world where there are no federal standards for the pollutants that were measured, and uncertainty about what affect the chemicals may have on humans.

But with the help of Schaver, Assistant Managing Editor John Mura and Assistant Metro Editor Mike Upsall, I set out to discover what secrets this set of data held. Rich Schiefer was the copy editor.

Because there are no national air standards for these chemi-

cals — no concentrations that would be illegal — I had to look elsewhere to find some sort of official set of thresholds.

I recalled that first story I did on the preliminary data three years ago, and how a University of Louisville expert had compared each chemical's level to corresponding "risk-based concentrations" or, as they're sometimes called, "reference concentrations."

Found in tables on EPA websites, officials use them to

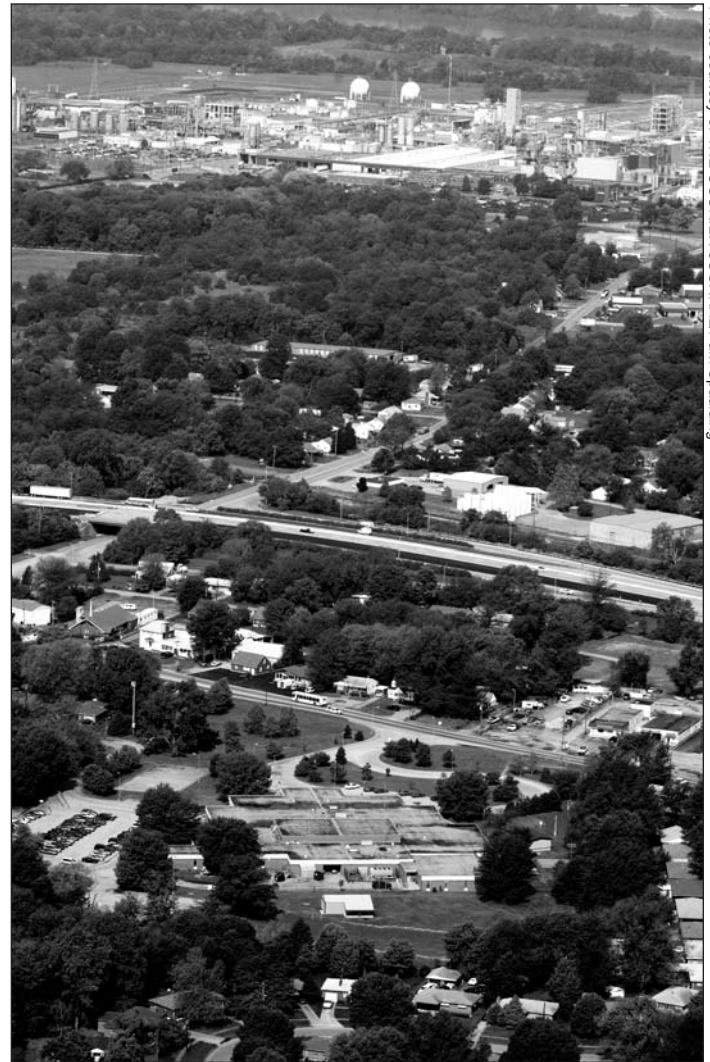


Photo courtesy of THE COURIER-JOURNAL/Pam Spaulding

Cane Run Elementary School (foreground) sits only a mile and a half from the Rubbertown plants.

screen contaminated sites for potential cleanup. I also found that the same data tables had been used as reference points for a risk assessment of air pollution in other communities, including one in far eastern Kentucky that began before I arrived and another one in Chattanooga in the 1990s.

For cancer, these tables show the values at which different scientists believe daily exposure to specific chemicals over several decades will produce one extra cancer case in 1 million people — a threshold that many officials consider unacceptable, or unsafe. For non-cancer illnesses — everything from rashes to liver damage — the thresholds represent the concentrations at which medical effects are likely to occur.

But it's not that simple.

There's no national set of these risk threshold values for
(Continued on page 20)

Research news roundup... (from page 12)

cy-making about sustainable development issues.

Other institutions also play influential roles, including the U.S. government, the researchers noted: These institutions not only control foreign aid and other material resources used for development, but also have a great deal of control over public knowledge of development issues because they determine who should benefit from development programs, what their needs are and how to intervene.

The researchers also suggested that development agency reports, international agreements and academic publications reinforce this power structure by using terms such as “first” and “third” world. This terminology suggests that certain parts of the world are needy or problematic and legitimizes the “ideological approaches of dominant national and international development institutions,” the researchers wrote, which have largely followed advanced capitalism and put environmental issues on the back burner.

However, in recent years environmental concerns have moved from the fringes of the international development debate to a more central role. The United Nations, for example, has become a primary advocate of sustainable development, which aims to integrate environmental protection with economics and prioritizes poverty, population and social issues in the development debate, in contrast to the economically driven approach of modernization and growth.

The United Nations as well as development agencies, social movement organizations and other institutions each struggle to promote their particular ideologies in the news media, but past research suggests that prominent institutions — and their ideologies — dominate sustainable development coverage.

So the researchers set out to explore this. First they studied UN documents on the topic to identify its ideologies, drawing from key UN conferences and reports, including Our Common Future of 1987, The Rio Declaration on Environment and Development of 1992, and The Programme for the Further Implementation of Agenda 21 of 1997, among others.

They compared this to AP and IPS coverage of sustainable development. According to the agencies' mission statements, the U.S.-based AP aims to gather news in an expedient and neutral manner, while the IPS, based in Rome, is a nonprofit “global news agency” that resolves to recognize voices and events from regions of the world that tend to be overlooked in mainstream media.

The researchers found that:

- The AP typically defined sustainable development as “economic growth for all tied to environmental protection,” while the IPS used this definition only once, opting instead for the United Nations' more holistic definition of the term.

- Both agencies addressed environmental concerns in a majority of their news stories — 81 percent of all AP stories and 63 percent of all IPS stories.

- About 58 percent of AP stories addressed energy issues, compared to 32 percent for the IPS.

- About 53 percent of IPS stories addressed human population issues, compared to 46 percent for the AP.

- Nearly 40 percent of the AP stories addressed industry issues, compared to one-fifth of the IPS stories.

- Food and urban growth issues were not prevalent in the coverage of either news agency.

- Industry-specific concerns, such as forest development and mining, were included in about 10 percent of all news stories for both agencies.

- Social concerns were raised only by IPS, where they appeared in about 25 percent of news stories.

- IPS coverage included concerns about ending poverty and the rights of developing nations, while the AP's did not.

- The news agencies most often identified international political and economic cooperation as the solution to achieving sustainable development goals, but did not include information about roles for corporations, nongovernmental organizations, local communities and social movements — although the United Nations identified them as keys to successful sustainable development programs.

- Government, but not UN, officials dominated coverage — they were used in 83 percent of the AP stories and 56 percent of the IPS stories.

- The AP cited US officials in 50 percent and officials from other countries in 15 percent of its stories, while IPS cited leaders of poor or southern nations in 70 percent of its stories.

- For both the AP and IPS, nongovernmental organizations — including representatives of Greenpeace, the Worldwide Fund for Nature/World Wildlife Fund and the Third World Network — were cited in less than half of the stories.

- Industry officials were quoted in less than one-fifth of the stories, although the AP was twice as likely as the IPS to do so.

The researchers also noted that issues identified as important by the United Nations — including the link between armed conflict and environmental stress and the need to integrate women into sustainable development initiatives — received far less news agency attention than economics, industry and other issues.

Finally, the 1997 UN conference and accompanying documents highlighted the failure of national and development institutions to successfully carry out sustainable development policies. Yet at this time the news agencies began to publish stories about using global political cooperation as a strategy to achieve sustainable development; they also referred to material issues related to economic and industrial concerns.

The researchers concluded that the news media “privilege traditional models of development,” adding that, overall, “news discourse relied on a narrow range of 'expert' sources, allowing dominant institutions to articulate this global concern Moreover, emphasizing economic concerns and resolutions corresponds with a more materialist conceptualization of development,” the researchers wrote.

“Sustaining Sustainable Development: International News Discourse on Alternative Development Strategies” by Jody Waters and Karin Wilkins was presented to the International Communication Association Intercultural and Development Communications Division in 2001 and is scheduled for publication this year.

Jan Knight, a former magazine editor and daily newspaper reporter, is assistant professor of communication at Hawaii Pacific University in Honolulu. Her research focuses on environmental journalism and international communication. She can be reached at jknight213@aol.com.

Chemical plants... (from page 9)

terrorist attack on any one of the 123 chemical facilities located in densely populated areas could expose 1 million people to toxic chemicals. An attack on one of 700 other facilities could threaten at least 100,000 people. And an attack at one of 3,000 other chemical sites could affect 10,000 people.

After 9/11, the EPA began developing guidelines for companies to assess their vulnerability to terrorism. Agency officials also seriously considered issuing new regulations to require the owners of all 15,000 of its “worst-case” sites to evaluate and improve security. Regulators planned to issue those rules under a provision of the Clean Air Act that authorizes the agency to control accidental chemical releases. Ultimately, though, the EPA feared that the chemical industry would sue and decided not to stretch the Clean Air Act to cover potential terrorist attacks. The EPA opted instead to go the legislative route and ask for more authority to mandate that the chemical plants better protect themselves.

EPA officials spent nearly a year working on a legislative proposal with the White House, the Office of Management and Budget, and various federal agencies. The major sticking point was whether the legislation should require companies to consider using safer chemicals and technologies.

“EPA initially said that one of the things facilities ought to at least look at as part of a comprehensive vulnerability assessment is whether there are steps they can take to reduce the hazards that are present at the site,” recalled a former EPA official who was involved in the debate.

Industry lobbyists forcefully fought the idea of a law requiring companies to consider safer alternatives. “Chemical companies make dangerous things,” noted Greg Lebedev, president of the American Chemistry Council, which represents 180 giants of the chemical manufacturing industry. “Getting into the technology of what you make and how you make it is a subject for an environmental or technology context, not security. I don’t want us to wander down an exotic path here.”

In late 2002, the EPA further angered industry by announcing plans to inspect the chemical plants it considered most vulnerable to an attack. The agency asked more than 30 companies to voluntarily allow EPA inspectors to tour their sites. At least two refused. The inspections that were undertaken, EPA officials say, found that safeguards varied widely. Some companies were aggressively improving security; others were doing nothing.

The EPA’s attempts to lay the groundwork for an aggressive security program proved to be its undoing. In early 2003, the White House responded to industry protests by pulling the EPA off the chemical site security beat.

The administration quietly shifted oversight to Homeland Security. Since then, industry officials and administration sources say, the federal government has done little to gauge the security at chemical plants.

The only concerted action on chemical plant safety is coming from the industry’s trade associations. The American Chemistry Council has been widely praised for a voluntary program in which it asks members to assess and upgrade security and to hire an independent auditor to judge their success. That program has been picked up by several other trade groups.

Industry officials admit that more needs to be done — though not by their members. “We have a bit of a vacuum,”

Lebedev says. “The EPA doesn’t do anything because that’s not what they do. DHS is still pulling itself together from all sides of Washington just to make itself into a reasonably homogeneous agency. No doubt it isn’t doing very much there.” Lebedev said his group now supports legislation to give Homeland Security the power to require chemical companies to conduct vulnerability assessments and improve their security. But he wants Congress to essentially exempt companies that have adopted the American Chemistry Council’s plan.

Environmentalists are suspicious of the chemical industry’s assurances that its facilities are doing enough. They cite dozens of instances in which news reporters or activists were able to walk into a chemical plant site or oil refinery without being stopped by a guard or barrier.

“We won’t have a complete picture of the safety at these facilities until the DHS has the resources and inclination to require all facilities to submit their security plans and then analyzes those plans,” said Jon Devine of the Natural Resources Defense Council.

Rick Hind, legislative director of Greenpeace’s toxics campaign, belittles the American Chemistry Council program as “PR eyewash.” The chemical industry’s promises, he said, are “lulling the Bush administration into complacency or overconfidence. So while the world seems to be gaining in reasons to hate us, we seem to be ignoring an entire sector of our infrastructure that sticks out like a sore thumb to terrorists.”

Corzine says he is frustrated that Congress has balked at ensuring the safety of plants that use and store vast quantities of potentially lethal chemicals. “It strikes me,” he said, “that there is just no willingness to move here. Almost two years after September 11, it’s hard to believe that if we’re committed to homeland security, we have not addressed something that everybody recognizes is among the top threats.” Corzine said he’s

(Continued next page)

“I’d like to make sure that chemical facilities on waterfronts have some control over access from the water. If you take a boat ride up Arthur Kill, between New York and New Jersey, you’d be shocked at how little security there is on the water side of those plants. It strikes me as absolutely an abject failure to address one of the serious soft spots in our communities.”

— Sen. Jon Corzine, D-N.J.

Louisville air... (from page 17)

the hundreds of chemicals that could be in the air. Instead, a large group of chemicals known as hazardous air pollution are regulated through technology — companies that emit above certain levels must install EPA-defined “maximum available” controls.

First, we compared our air sampling to the screening thresholds table used in the EPA’s Region 3, based in Philadelphia. We were told that this was the table used by the state of Kentucky, even though Kentucky is in Region 4, and that this table was being used in the official Louisville study.

Later, we found out that while Kentucky still uses the Region 3 table in some cases, the state and Kentucky’s region of the EPA, based in Atlanta, was switching over to a newer table with different screening values developed in Region 9, based in San Francisco. We also later found that the consultants doing the official Louisville report were developing their own reference concentrations in an entirely different way — one that we would be unable to replicate.

I thought the story was dead.

But after some more discussion with the experts, in and out of government, and getting further assurances that our approach

was sound, we decided to compare the sampling results to both the EPA regional thresholds.

After crunching the numbers, we found that the monitors had detected more than 100 compounds.

But there were dozens that presumably the community need not worry about, because their concentrations were below the risk thresholds. However, we found 18 chemicals exceeded risk thresholds in both sets of screening tables. One stood out: 1,3 butadiene, which is used in synthetic rubber production and also comes from motor vehicle exhaust. However, the monitors showed the highest readings of butadiene closest to chemical plants that emit thousands of pounds of the chemical annually.

At the same time, Small at Carnegie Mellon had agreed to compare some of the concentrations of those 18 chemicals with EPA estimates of what the government would expect to find in a typical urban area. These were found in the National Air Toxics Assessment, last updated in 1996. He found that for at least five of the chemicals, concentrations in Louisville were between 1,000 and 10,000 times higher than what the EPA would expect.

(Continued next page)

Chemical plants... (from page 19)

looking for “every possible avenue” for getting his proposal written into law.

Early this year, Corzine reintroduced his bill. Meanwhile, Chairman Inhofe drew up his own chemical-security legislation with input from the administration. In May, Inhofe announced plans to mark up his measure. But he didn’t have the committee votes to pass his version, which critics say wouldn’t go far enough to protect chemical facilities sites. Inhofe’s bill would not require companies to submit vulnerability or security-improvement plans to Homeland Security. It also would not require companies to consider using alternatives to current chemicals and practices.

After a short, unsuccessful flurry of negotiations between Democrats and Republicans, Inhofe’s version was shoved onto a back burner until the committee completes work on the transportation reauthorization bill, which is considered a top priority because it will bring political pork to lawmakers’ financially strapped home states.

The White House is pushing Inhofe to take up its proposed rewrite of the Clean Air Act immediately after Congress’ summer recess. If the chairman agrees, action on his chemical security measure could be delayed yet again.

The most significant difference between the Inhofe language and Corzine’s bill focuses on Corzine’s desire to encourage industry to use inherently safer technology at the chemical facilities. Inhofe and industry lobbyists strongly oppose that approach. Corzine sees that mandate as critical.

“I’m staying with it,” he said in an interview. But he added, “You know, at some point I’d just like to see fences put up and be certain that they’re being monitored. I’d like to make sure that chemical facilities on waterfronts have some control over access from the water. If you take a boat ride up Arthur Kill, between

New York and New Jersey, you’d be shocked at how little security there is on the water side of those plants. It strikes me as absolutely an abject failure to address one of the serious soft spots in our communities.”

Republicans, however, tend to be inclined to give the chemical industry the benefit of the doubt on security issues. Several current and former Bush administration staffers said that the White House simply isn’t interested in creating a massive program for inspecting chemical plants. And House Energy and Commerce Committee Chairman Barton said that although he’s monitoring the situation, he sees no need for tough new chemical security requirements in the aftermath of 9/11.

“The problem you have in an open society is that it’s physically impossible to make any large industrial site terrorist-proof,” Barton said. “If there are enough terrorists who are dedicated enough and equipped well enough, they’re going to overwhelm everything that you put up short of some sort of Fort Knox — which doesn’t make much sense, given the cost and the relatively remote possibility that any specific site is going to be targeted.”

Security experts counter that while it might be unlikely that any particular chemical facility will be attacked, it is not unrealistic to think that some chemical facility will be targeted. Former White House counter-terrorism adviser Beers contended that the Bush administration ought to enhance security at chemical plants. “This is one problem they can do something about,” he said. “Why isn’t it being done?”

Margaret Kriz, a former SEJ board member, covers the environment for The National Journal.

Louisville air... (from page 20)

I also found that the levels of butadiene in Louisville would be illegal in Louisiana, one of the few states with its own air standards for a full range of hazardous air pollutants.

At this point, we began to share our results with the EPA and others involved in the study, including industries. The EPA did not want us to publish our analysis, essentially telling me that I should leave brain surgery to brain surgeons. But during that interview, I was able to obtain the health threshold for butadiene that was going to be used in official risk assessment of the data — a higher threshold that showed less of a risk, but nonetheless, an unacceptable risk.

As for the industries, some declined to comment, saying they would wait for the official report, but at least two said it appeared they would need to reduce their emissions.

Then a week before publication, inexplicably Region 3 of the EPA posted a new set of risk thresholds on its website. So Mark Schaver had to do part of the analysis over. There were only minor changes, though.

If you are with me this far, then you can appreciate the following: My editors, including Managing Editor Ben Post and Executive Editor Bennie Ivory, displayed tremendous patience with this story due to its complexity. I needed to make sure that the gray areas of science — the limits of our analysis — were clearly identified in the story.

But I didn't sleep well the night before publication, with an unusual case of "what if I am wrong" worries. While I have covered the environment for two decades, I had not taken on chemical risk assessment before on such a large scale.

Those worries turned out to be unnecessary, as the story was right on the mark. We know this because a week later, I obtained a copy of a just-completed draft risk assessment from the consultants. If anything, it presented an even more comprehensive picture of air pollution concerns for Louisville. We published a story about the draft report on May 22.

The consultants went beyond our analysis by projecting cumulative risk from multiple chemical exposures at each of the monitoring locations. Those risk levels turned out to be higher than the EPA had previously estimated for anywhere in the United States — a fact that Small at Carnegie Mellon was able to point out to me and my readers — after reviewing the draft report and comparing its findings to National Air Toxics Assessment (NATA) from 1996.

And he was able to show me his documentation in very quick

order. Interestingly, this piece of national context was not mentioned in the draft report.

That same day, the governor dispatched his top environmental official to Louisville for a previously scheduled community meeting at which a summary of the draft report was to be presented, and the mayor announced that he was calling a meeting with the three companies in Louisville that emit butadiene. After that meeting the following Tuesday, the three companies went before the TV cameras — television's first acknowledgement of *The Courier-Journal's* reporting — and promised voluntary reductions.

Many communities are or have done at least some monitoring for hazardous air pollutants; fewer have done full-blown risk studies.

Some previous studies were not done using actual air monitoring, but computer modeling based on reported emissions. One EPA official told me that the EPA prefers this method. However, citizen groups often want actual air monitoring.

Among the areas that have done risk assessments: Chattanooga, Tenn., the Ashland, Ky. area, and Baltimore. EPA maintains a database of the studies and recently developed a database of community assessment and risk reduction projects across the US. This website can be accessed at: <http://yosemite.epa.gov/oar/CommunityAssessment.nsf/RiskSearchForm?OpenForm>

For me, the follow-up coverage begins.

One story focused on how a group of national environmentalists had trained local residents to take their own samples. Another was based on the filing of a lawsuit — by the state's former top environmental official among other attorneys — alleging that the

pollution was so aggravating that it was depriving a Louisville family of the full use and enjoyment of their home.

The lawyers say they will wage a full-fledged attack on companies and regulators.

We've looked at where pollution comes from in Louisville and have identified trends. Some types of pollution have decreased, but others are on the rise.

It appears to be the year of breathing dangerously in Louisville.

Resources on air pollution and health risks:

The Courier-Journal coverage of Toxic Air stories:

<http://www.courier-journal.com/cjextra/2003projects/toxicair/index.html>

EPA Region 3 Risk Assessment tables

<http://www.epa.gov/reg3hwmd/risk/index.htm>

EPA Region 9 risk thresholds

<http://www.epa.gov/region09/waste/sfund/prg/index.htm>

EPA IRIS database (Integrated Risk Information System)

<http://www.epa.gov/iris/>

EPA Hazardous Air Pollutants fact sheets

<http://www.epa.gov/ttn/atw/hapindex.html>

Agency for Toxic Substances and Disease Registry fact sheets

<http://www.atsdr.cdc.gov/toxpro2.html>

James Bruggers covers the environment for The Courier-Journal in Louisville and has been a board member of the Society of Environmental Journalists for six years, serving two years as president.

Awards... (from page 6)

Broadcast Journalism, Columbia University; Jeffrey Dvorkin, National Public Radio; Peter Dykstra, CNN; Paul Glickman, KPCC News; Marguerite Holloway, *Scientific American*; Marley Klaus, KQED; Liz Lempert, Living on Earth; Randy Lee Loftis, *Dallas Morning News*; Peter Lundquist, Gannett Newspaper Division; Betsy Marston, *High Country News*; Vince Patton, KGW-TV; Deborah Potter, NewsLab; David Poulson, Knight Center for Environmental Journalism, Michigan State University; Chuck Quirnbach, Wisconsin Public Radio; Jacques Rivard, Canadian Broadcasting Co.; Raequel Roberts, *Houston Chronicle*; Steve Ross, Columbia University Graduate School of Journalism; Deborah Schoch, *Los Angeles Times*; Al Tompkins, The Poynter Institute, and Jim Van Nostrand, Knight Ridder Newspapers.

SEJ's Awards Committee selects the judges and sets the rules for the contest each year in close consultation with the society's board of directors. The committee's co-chairs are Natalie Pawelski, CNN and Tim Wheeler, now on leave from the *Baltimore Sun*. Other panel members were: Dina Cappiello, *Houston Chronicle*; George Homsy, freelancer from Canandaigna, N.Y.; Mike Mansur, *The Kansas City Star*; Tom Meersman, *Minneapolis Star-Tribune* and Ilsa Setziol, KPCC-FM, Pasadena, Calif..

Complete results, with selected quotes from judges:

Beat Reporting – Print:

1st: Perry Beeman, *The Des Moines Register*, for what judges deemed thorough and courageous reporting on lax environmental regulation and agribusiness' efforts to suppress unfavorable research.

2nd: Elizabeth Shogren, *Los Angeles Times*, for "enterprising and energetic" coverage of Bush Administration environmental policies.

3rd: Ray Ring, *High Country News*, for writing with "depth and texture" on topics as diverse as wolves, killer bees and snowmobiling.

Beat Reporting – Radio:

1st: Cheryl Colopy, KQED-FM, San Francisco, for reporting on salmon farming and other stories.

2nd: Jon Christensen, Nevada Public Radio, for his "Nevada Variations" series on the state's special places and the people who care about them.

3rd: Karen Kelly, Ottawa Bureau, Great Lakes Radio Consortium, for "Environmental Spies" and other stories, including a humorous take on bicycle commuting in subzero weather over icy streets.

Beat Reporting – TV:

1st: John Daley, KSL-TV, Salt Lake City, for reporting on SUVs and climate change.

2nd: Vince Patton, KGW-TV, Portland, Ore., for lively and diverse reporting on urban swifts, household pollution and the Army Corps of Engineers.

No 3rd place winner.

In-Depth Reporting – Print:

1st: "The Swamp," by Michael Grunwald, *The Washington Post*, a series examining the politically imperiled federal-state plan to restore Florida's Everglades.

2nd: "Mercury Taints Seafood," by Ben Raines and Bill Finch, *Mobile Register*, for a series of stories examining the Gulf's oil rigs as a source of mercury contaminating the area's fish.

3rd: "Our Troubled Sound," by Robert McClure, Lisa Stiffler, Lise Olsen and Paul Joseph Brown, *The Seattle Post-Intelligencer*, for a series on environmental problems in Puget Sound.

In-Depth Reporting – Radio:

1st: "The Rivers South," by Clay Scott, NPR's "Living on Earth," for a "remarkable" audio trip along two endangered rivers, the Chattahoochee and the Apalachicola.

2nd: "The Science of Climate Change," by Bob McDonald, Jim Handman and Pat Senson, CBC Radio, Quirks and Quarks, for an "intelligent primer" on this complex topic.

3rd: "Planetary Protection," by Robin White, NPR's Living on Earth, for "important and timely science journalism" on research in Canada's arctic into the introduction of foreign life forms.

In-Depth Reporting – TV:

1st: "La Oroya, City of Lead," by Craig Cheatham, Mark Hadler and Andrea Torrance, KMOV-TV, St. Louis, Mo., for reporting on the health and environmental problems caused in a Peruvian town by a smelter owned by a locally based company.

No 2nd or 3rd place winners.

Online Reporting:

1st: "Florida's Springs: Protecting Nature's Gems," by Peter Lane Taylor, Russell Sparkman, Kevin Sparkman, Toby Malina and Tim Gasperak, www.floridasprings.org, FusionSpark Media, for a multidimensional package examining the challenges of protecting the state's drinking-water aquifers.

2nd: "Flooding Southern West Virginia," by Penny Loeb, www.wvcoal-field.com, for a "comprehensive examination" of recent floods and their underlying environmental causes.

No 3rd place winner.

(Continued on page 34)

Volunteer prize... (from page 5)

for SEJ, they're also coming up with lots of creative ideas to make it better. Mentoring captures the essence of what SEJ is all about: journalists helping other journalists, for the betterment of journalism. The program works so well because it's so flexible, and because we have two amazing volunteers doing the matchmaking. The fact that we've been able to match so many pairs is a great compliment not only to Orna and Dawn, but also to the many SEJers who have stepped up to volunteer to be mentors. Even so, the demand for mentors is still exceeding the supply, so I hope we'll get many more volunteers."

The Stolberg Award, an engraved plaque, was presented Sept. 10 at SEJ's 13th annual conference in New Orleans. Created in 1998, the award is given annually to a member or members whose service to the society and to other members epitomizes the volunteer spirit of its namesake, David Stolberg, one of SEJ's founders.

The winner is selected by a panel of three judges drawn from SEJ's board of directors and staff, and appointed by SEJ's president. Judges this year were: SEJ Vice President Perry Beeman, SEJ Associate Director Christine Rigel, and board member Tim Wheeler.

TNC probe... (from page 1)

Part One of the series outlined how the tiny non-profit became the “world’s richest environmental group, amassing \$3 billion in assets by pledging to save precious places.” The group has aligned closely with corporations and pursued drilling, logging and development. “Its approach has led to strange bedfellows” the newspaper found.

The first part included a story on compensation for President Steven J. McCormick and use of a discretionary fund as a story on the group’s image-making efforts.

Part Two looked at some of the activities of the Conservancy, including the ill-fated effort to drill for oil on land that included an endangered bird, how some for-profit businesses failed, and how the conservancy uses and sells its logo.

The final part looked at how the organization’s controversial “conservation buyer” program had allowed some insiders and others build on environmentally sensitive land, winning valuable tax credits in the process.

The series was written by *Post* staff writers Joe Stephens and David Ottaway, both of the *Post*’s investigative reporting unit. They visited Conservancy operations and sites in Maine, Virginia, Wyoming, Massachusetts, Minnesota, New York and Texas. Work on the series began in March 2001 but was interrupted by their reassignment to the events arising from the Sept. 11 terrorist attacks and the war in Afghanistan and then the invasion of Iraq.

The series finally ran May 4, 5 and 6.

Stephens, an Ohio native, holds a B.A. from Miami University. Before joining *The Washington Post*, he bounced around Midwestern newspapers and spent a decade as a projects reporter at *The Kansas City Star*. For the last four years, he has been a member of *The Post*’s investigative unit. He has written about political corruption, presidential campaign violations, terrorism, the judiciary, white-collar crime and drug experiments conducted on Third World children.

Ottaway grew up in upstate New York. He received his B.A. from Harvard College and Ph.D. from Columbia University. After working for *UPI* in Paris and Algiers, he joined *The Washington Post*’s foreign desk in 1971. Since that time, he has served as a foreign correspondent in Africa, the Middle East and Europe and a national security reporter in Washington. In 1994, he joined *The Post*’s investigative unit.

SEJournal posed a series of questions to Stephens to get the inside story on how the project was researched and written:

Q. How did the story get started? Where did the idea or tip come from?



Photo courtesy of THE WASHINGTON POST/Sarah L. Voinin

The front entrance of The Nature Conservancy near Washington, D.C.

A: *The Post* investigative unit has long been interested in the growing influence of non-profit organizations. While researching this topic, my colleague David Ottaway ran across The Nature Conservancy, a local charity whose size — \$3.3 billion in assets — caught his attention. He soon realized the Conservancy was involved in some unusual activities.

In March 2002, after the Sept. 11 terrorist attacks and related fallout, Ottaway picked up the story in earnest and I joined the effort. Investigative Editor Jeff Leen and Marilyn Thompson, assistant managing editor/investigative, directed the reporting and kept the project on track.

The plan was to conduct a performance audit of the organization. We selected programs that the conservancy held out as successes and national models, and then attempted to verify the organization’s claims. We also scoured their financial reports.

Q. The story basically concerned TNC’s activities across the country. Did it start out that way? If not, at what point did it go from local to national?

A: The conservancy’s operations stretch across the world, so from the beginning we envisioned the project as a national story. We simultaneously approached it as a local story, since the con-

(Continued next page)

TNC probe... (from page 23)

servancy is based in northern Virginia, a few miles from *The Washington Post*.

Q. Usually environmental groups have to push newspapers to do stories about the questionable activities of companies. Was it strange to be doing a “bad actor” story on an organization that is usually seen as “a good guy?”

A: We do not consider the conservancy to be a good guy or a bad guy. We approached the conservancy as we would any

nal and external audits, Congressional testimony, IRS regulations, annual reports, Security and Exchange Commission filings, opinion polls, and marketing strategy reports.

Q. I noticed two researchers were credited on the bottoms of some stories. How important was their work and how did you work with them?

A: We’re lucky at *The Post* to have incredibly smart and skilled researchers. For this story, Alice Crites and Lucy

Shackleford spent time at the thankless task of helping retrieve real estate and legal documents from far-flung courthouses around the country.

Q. Obviously at some point, you had a lot of information and had to start organizing it. Tell me how you kept track of the information, what sort of system you used and then how you retrieved the information as you wrote and reported.

A: I tried to write up findings as I went along. For example, while reading a massive legal filing, I

would type up notes along the way, then at the end try to fashion them into a sort of memo to myself. In some cases, we prepared our own electronic indexes to documents, typing topics and individual quotes into a Word file, along with notes about where we could find the original pages in our many file boxes. In Window, I created a separate subdirectory for the project and sub-subdirectories for each of its many parts. Then I dumped everything into them: Word files, HTML files, databases, Acrobat files and so on. That way, we could search for text and file names electronically.

I also kept manila folder files, arranged alphabetically by topic and by proper name. I cross-filed as many documents as I could.

Q. TNC put a lot of effort into trying to dampen the effect of the stories as they came out. How did you feel about being so publicly criticized?

A: We are accustomed to being criticized by the subjects of investigative articles. We trust readers to sort out any conflicting claims and we trust that the ultimate results will bear out our findings — as they have in this case.

What was striking in this instance was that the Conservancy finalized its response long before our reporting ended — and before the shape of the series had been established. Internal records memorialized its damage control plan more than six months before the articles hit print. In a January 2003 conference

(Continued next page)

Photo courtesy of THE WASHINGTON POST/James M. Thresher



This sprawling mansion, being built for Daniel W. Stanton of Goldman Sachs, is part of a housing development on a Martha’s Vineyard nature preserve. The project is brokered by The Nature Conservancy and subsidized by federal taxpayers.

organization, be it a federal agency, city government, major corporation or charity. The plan was to make no assumptions, collect as many documents as possible and independently verify as many facts as we could. We had reported on, and investigated, charities in the past, so that aspect did not seem novel.

Q. Your stories often quoted internal documents. How did you get them? Did TNC officials seem surprised you had them?

A: We were lucky enough to develop a wide variety of sources, including former and current employees, ranging across the organizational structure. We asked each one to provide us with as many documents as possible, no matter how boring or trivial they might appear. Pieced together, the documents presented a mosaic portrait of the conservancy that diverged widely from the organization’s public image.

We don’t know if the conservancy was surprised, but some of the internal documents establish that senior managers were not happy; we have copies of at least three memos directing employees not to talk to us, one signed by conservancy President Steven McCormick. One memo suggests that staffers tell reporters from *The Post* that they are “busy,” and to then alert senior managers.

Q. What other types of documents did you use?

A: We have a dozen or so file boxes of paper documents, and thousands of electronic documents as well. They include IRS Form 990 tax returns, property records, mortgage records, conservation easements, lawsuits, memos, biological opinions, inter-

TNC probe... (from page 24)

call, for example, the conservancy marketing department discussed ongoing “opposition research [into] TNC detractors.” Executives said at the time that their response after publication would include a written “point-by-point rebuttal,” a meeting with *The Post* ombudsman “to itemize issues of editorial bias” and op-ed columns and letters-to-the-editor written by “prominent responders.” That is what happened. The conservancy also has hired a politically connected, outside public relations firm and an outside lawyer to help in the effort.

Today there are signs that, with the help of outside specialists, the conservancy may be rethinking its approach. The organization enacted sweeping reforms in June. A few weeks later, conservancy President Steven McCormick acknowledged on a radio talk show that *The Post* may have actually done the Conservancy “a favor.” McCormick explained that he had initially followed his “natural impulse” to strike out, but had since changed his mind: “This could be good for us,” McCormick told a caller to the show. “This is an opportunity for us and other organizations to take a hard look at our activities. Non-profit organizations are held to a higher standard, and they should be.”

Q. A key part of the story was the “Conservation Buyer” program and the tax ramifications of that. I’d imagine that public records played a part in tracking what The Nature Conservancy spent to buy land and what they sold it for. How did you find out about what people were donating and how did you tie it all together?

A: We scoured property records to determine what the conservancy paid for land, how much it paid, and how much it charged when it resold the land to its own trustees. We also read conservation easements attached to the deeds to determine just how much grading and building the conservancy’s trustees were permitted to do on the sites.

The difference between the purchase and resell prices generally established the sizes of the tax break. In many cases, the buyers were happy to confirm the figures, because they were unaware anyone might consider such insider deals to be questionable.

Q. Has the Internal Revenue Service looked at the program?

A: Confidentiality rules do not permit the IRS to comment on what it may or may not be doing in this area. However, the Senate Finance Committee has asked the IRS to participate in its review of Conservancy practices. The committee also has asked for the Social Security numbers of key conservancy officials and of anyone to whom the organization sold real estate.

Q. The story had a lot of legs. The Nature Conservancy took action but there were also some calls for investigations by Congress members and the like. What has happened since the stories ran?

Since the articles, the conservancy has hired outside public relations specialists and an outside attorney, in what an internal memo calls an attempt to head off a congressional investigation. In June, the conservancy’s board of governors voted to permanently abandon a wide array of practices discussed in the series, ranging from drilling for oil to lending employees money to selling undeveloped land to its trustees as home sites. So far, the conservancy has announced 18 separate reforms and says it is hiring outside consultants to help implement more.

Nonetheless, the Senate Finance Committee is forging ahead with an independent review. On July 16, the committee asked the conservancy for thousands of pages of internal documents reaching back a decade and spanning 18 broad topics. The Senate has issued more than 100 questions and requests for information to the conservancy; they include inquiries into executive compensation, tax breaks and conflicts of interest. Committee members have said they expect to propose legislative reforms. On the other side of Capitol Hill, a House member also is working on remedial legislation.

Senate Finance Committee Chairman Charles E. Grassley (R-Iowa) said: “*The Post* reports shed light on very questionable practices by this charity that many have viewed as a pillar. I’m committed to holding The Nature Conservancy accountable. I’ll be overseeing the charity’s actions, asking tough questions and following through until satisfactory answers are given.”

Q. I noticed that a lot of different groups put links (or picked up the whole series) on their websites, from property rights groups to other environmental groups. Do you think some environmental groups relished seeing The Nature Conservancy getting bad publicity?

We have had very positive responses from members of other environmental groups (as well as from conservancy members, conservancy employees and the general public). However, many environmental groups and their managers say they will not go public with their views, for fear of tainting the wider movement. Several have compared environmentalism to a religion, and explained that “you don’t publicly criticize other churches.”

Q. The Nature Conservancy said you worked on this for two years and it cooperated with you. How much time did you work on this story? Was there a time when The Nature Conservancy became less than cooperative and, if so, how did you handle it?

The conservancy’s approach changed little over the course of the reporting. From the beginning, conservancy administrators chose not to answer many of our questions, gave incorrect responses to other questions and decided not to allow us to review many records. They directed staffers not to take our calls and investigated people who did talk to us. We simply talked to as many people as possible and collected as many documents as we could.

The Post became interested in the conservancy in 2001 and visited three project sites. It was not until after the reporters were finished writing about the Sept. 11, 2001, attacks and the invasion of Afghanistan that reporting on the conservancy began in earnest, in March 2002. Work on the project was suspended for months in the run-up to the Iraq war, during the fighting and in the aftermath. The series was published when war news abated and freed up more room on the front page in May 2003.

To view the series:

<http://www.washingtonpost.com/wp-dyn/nation/specials/natureconservancy>

To see The Nature Conservancy’s reaction:

<http://nature.org/pressroom/links/art10505.html>

Mike Dunne, a reporter for The Advocate in Baton Rouge, La., is assistant editor of SEJournal.

Air pollution... (from page 1)

only once or twice a year when a hot-button topic would arise — such as mandatory no-burning nights for homeowners with fireplaces.

Everybody talked about dirty air, but nobody did stories explaining it.

browsing and figuring out where your community lands in the national picture.

Then, if it appears you have a story about your community, spend more time learning the chemistry of ozone and particulate matter — nitrogen oxides, volatile organic compounds and microscopic chemical bombs such as ammonium nitrate.

Understanding how, where and why these pollutants form will illuminate every other discussion you hear on air quality. You'll need this grounding to understand a lawsuit settlement between the government and truckers, or a very loud argument between the dairy industry and environmental community over emissions coming from murky animal waste lagoons.

A quick description of the two main pollutants:

Ozone forms in summer when nitrogen oxides from vehicles and other combustion sources combine in sunlight with volatile organic compounds, which can come from paint fumes, manufacturing processes and other sources. Ozone is the main ingredient in smog.

Particulate matter, measured in micrometers or microns, comes from dust, soot, chemicals, moisture and atmospheric processes that bond various combinations of tiny specks together into some dangerous combinations. Particulate matter that are 10 microns

wide are about one-seventh the width of a human hair.

As for health effects, ozone is a well-known corrosive. It causes damage in tissue — eyes, skin and, of course, lungs. After exposure to high concentrations of it, your lungs become slightly seared, as if sunburned.

Researchers know far less about particulate matter, but in the past decade they have connected it to heart attacks, elevated blood pressure and higher mortality rates. Most health experts who understand the research to date will say particulate matter could be more dangerous than ozone.

Both ozone and particulate matter can trigger asthma attacks and other lung problems, such as bronchitis.

(Continued next page)

Photos courtesy of THE FRESNO BEE/Mark Crosse



Along San Francisco Bay, the Chevron oil refinery produces smog-forming chemicals, some of which may blow east into the San Joaquin Valley.

When I began covering the local air district regularly in 1999, it was obvious after a few meetings that the air district would not be the only stop in the hunt for understanding. You may find better ways to enter this equation, but the best, immediate source for me were websites for the U.S. Environmental Protection Agency and the California Air Resources Board. I used them to track the history of air violations in the valley. I needed to build my own perspective.

In addition to determining that the valley was the country's third-worst offender of the one-hour ozone standard, I found a lot of explanation of air pollution. For anyone covering the air quality beat, the EPA website offers wonderful background that brings the issue into perspective. Spend a few minutes

The Fresno Bee's 'Last Gasp' air-pollution series reaps rewards

By MARK GROSSI

When we started our research on San Joaquin Valley air pollution, we never dreamed the air problem was approaching the depth of the mess in Los Angeles, the nation's smog king for decades. We discovered early in our look at the numbers that the valley was actually worse in one very important category — eight-hour ozone violations.

Reporters Russell Clemings, Barbara Anderson and I concluded the eight-hour health standard was very important, showing people were being exposed to long bouts of unhealthy air on bad days. It opened the door to many questions and guided our initial investigation.

The questions: Did Los Angeles improve or did the valley get worse? How do the two areas differ? What was happening

to the health of the people living in this valley? What caused the valley's problems? And, finally, what were the solutions?

We found Los Angeles had vastly improved, but the valley had made only modest gains. The main reasons quickly emerged:

- The valley's unforgiving topography and climate make it perhaps the best air pollution trap in the country.
- Science had greatly underestimated agriculture's contribution as well as other pollution sources.
- And the bureaucracy — from the federal level down to the local level — was mired in foot-dragging and malfeasance. The state's Smog Check program was missing the worst-polluting vehicles.

(Continued next page)

Now, unless you have no life at all, read the condensed version of the 1990 Clean Air Act update on the EPA website. I read the whole Clean Air Act and, trust me, you don't want to go there unless you're writing a book on it. Also, it wouldn't hurt if you know an air-quality lawyer who will spend some time explaining the structure to you and how your community fits into it.

The Clean Air Act is an ingenious law. For our purposes as journalists, it is important to know cleanup deadlines for the "criteria" pollutants, which include ozone and particulate matter. That's where I found my first real news hook for our coverage.

Not only had the San Joaquin Valley reached the unenviable status of third-worst in the nation behind Los Angeles and Houston, it had never achieved healthy air, according to federal definitions. A local environmentalist helped me reach that conclusion, which obviously was not going to be written on any website or volunteered by any government bureaucrat.

Then the valley missed another in a long line of cleanup deadlines in late 1999, and a bigger story was starting to form for me.

But, still lost in my learning curve, I was left with troubling questions: Why would California care what the federal government thinks about air pollution? California has more stringent standards. And, in that line of thinking, what part did the state play in local or regional air cleanups? Didn't the local air district have full control of air quality in this region? Finally, does the air district answer to the state or to the federal government?



Fred Fuerte's severe asthma confines him to his Fresno home for much of the day. Breathing on a smoggy day in the valley, he says, is like "driving with the hand brake up."

Enter the three-headed bureaucratic monster: the local district, the state authority and the feds.

It turns out everyone pays attention to the feds because they have a hammer, known as sanctions. If a local air district has missed a deadline, the Clean Air Act requires the EPA to first charge extra fees to new and expanding businesses. If the district does not clean up the problem, the EPA freezes road-building

funds six months later. And the feds are supposed to take over the cleanup themselves, a supposedly chilling thought among local politicians and business owners.

Federal sanctions are largely used as a threat. Still, federal sanctions have been levied in several places, including the San Joaquin Valley. And California's enforcement is toothless by comparison.

I couldn't write off the state, though. The California Air Resources Board has done some of the most progressive air pollution research in the world. It has a load of information on everything from the effects of rush-hour traffic on pollution to health studies on children. Not every state

performs that kind of research, but it will be worth your time to find out what your state has.

The state and the federal government also play the major roles in regulating so-called mobile sources, meaning most anything that moves and puts out air pollution. The state comes up with standards for fuels and engines in cars; the feds control trains, planes, boats, interstate trucks and diesel fuel, among other things.

(Continued next page)

It was interesting enough that the local air district and the U.S. Environmental Protection Agency had combined to miss about 20 deadlines since 1991, but there was more. Environmentalists, who had been nonexistent throughout the 1990s, started filing lawsuits in 2001. They won the first hand-out without even getting into court. With stories on the legal battles, we began building interest in the story long before the project published.

We divided the project into five pieces: an overall explanation, the health effects, the farming pollution, the vehicle pollution and the solutions. To illustrate the project, photographer Mark Crosse worked with each of the three reporters, as did graphic artists John Alvin and Theresa Doffing. Assistant Managing Editor Don Johnson coordinated the massive effort.

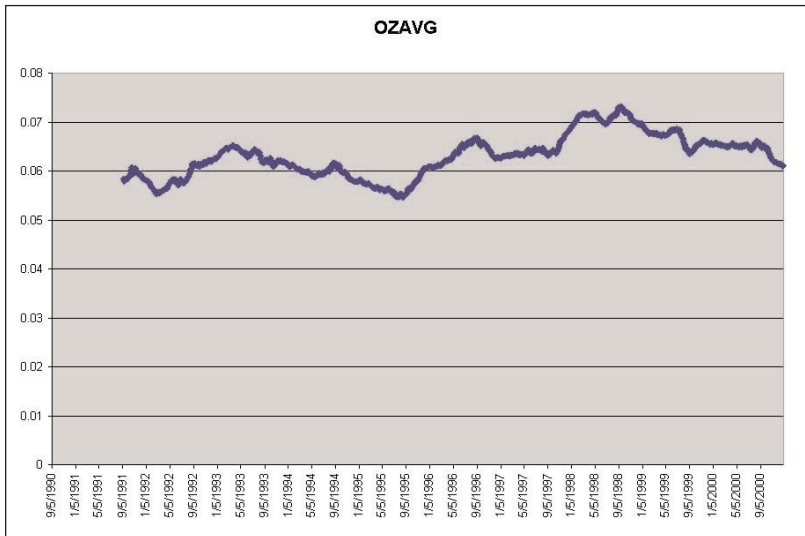
When we finished, we had a 24-page section filled with stories about bureaucratic neglect, industry influence, badly estimated pollution inventories and tragic health consequences. We also had several stories on solutions to the problems and there were suggestions for everyone from the home owner to the EPA.

Months after the "Last Gasp" project was published, eight bills are before the state Legislature to address air pollution in the valley. Two voluntary cleanup efforts have sprouted from industry, and *The Fresno Bee* has published dozens of stories and editorials that lifted the public awareness from coffee shops to corporate board rooms.

The newspaper has also reaped awards for this effort. Recently, *The Fresno Bee* team won an Investigative Reporters & Editors' certificate for medium-sized newspapers.

Graphs... (from page 11)

The resulting chart does a good job of smoothing out the data to show a long-term trend. With this graph, and an explanation of what a 365-day moving average is, we can say with some confidence that the 1990s saw one-hour daily ozone peaks edge



A 365-day moving average smooths peaks and valleys in the data.

upward in Clovis.

At this point in our reporting, we are ready for quality control. When we did this in real life for *The Fresno Bee* project “Last Gasp,” we showed our graphs to various experts at the state

and local air pollution control agencies. We also explained how we did the analysis and asked for their comments on it.

All agreed that the 365-day moving average was a valid way to show the long-term trend. But one expert at the Air Resources Board went a step further. He encouraged us to throw out the winter values and look only at the summer data.

His reasoning: Although no one knows for sure, it’s likely that very low levels of ozone are not a health threat. The state’s one-hour ozone standard of 0.09 parts per million is exceeded regularly in the summer. But in winter, typical levels are far less. And an increase from 0.02 to 0.03 is clearly not as important as an increase from 0.12 to 0.13. Yet our 365-day moving average would regard them both as important.

The ARB expert suggested a number of alternative approaches. We chose one that was doubly elegant, being both easy to calculate and easy to explain. For each year, we calculated and plotted just one value — the average daily peak for the summer smog season, May 1 through October 31.

Here’s how to do that: Go back to the data sheet — Sheet1 (2) — and put the cursor on A1, then add two new columns (click Insert/Columns twice). Put the label “Year” in A1 and “Average” in B1. Then, type the years 1991 through 2000 in cells A2 through A11.

(Continued next page)

Air quality... (from page 27)

Finally, I answered why the local air district was not making big headlines in a place where the air was almost as bad as Los Angeles. The local air agency, called the San Joaquin Valley Air Pollution Control District, is responsible for planning air cleanups. But it has authority over perhaps only 35 percent to 40 percent of the problem.

The air district makes regulations for stationary sources, such as power plants, oil drilling operations, dry cleaners, restaurants and glass factories. It also has some authority over area sources, which include fireplaces, water heaters and several others.

But vehicles — cars, light trucks, buses, heavy-duty trucks and off-road vehicles — make more than half of the mess in the air for the valley and many other places.

So, in the arcane world of air pollution control, there are three sources: mobile, stationary and area. The area sources run



Photo courtesy of THE FRESNO BEE/Mark Crosse

the gamut from water heaters to huge chunks of agriculture, which is a \$14 billion industry in the valley.

Once you understand that the local air district is in charge of just the stationary sources and a good number of the area sources, you will realize the locals can’t make serious inroads on a cleanup without the state and federal governments.

You also may notice local industry is quite visible at all the local air board meetings. Industry lobbyists, who speak the air pollution language, are involved from the ground floor in making regulations. The impact of air pollution regulation on business and industry is a good story. Don’t ever ignore the industry lobbies when they complain about the costs, but check their numbers and ask other regulated industries about the claims.

At the same time, the local board members in California are mostly elected officials from boards of supervisors and city coun-

(Continued on page 36)

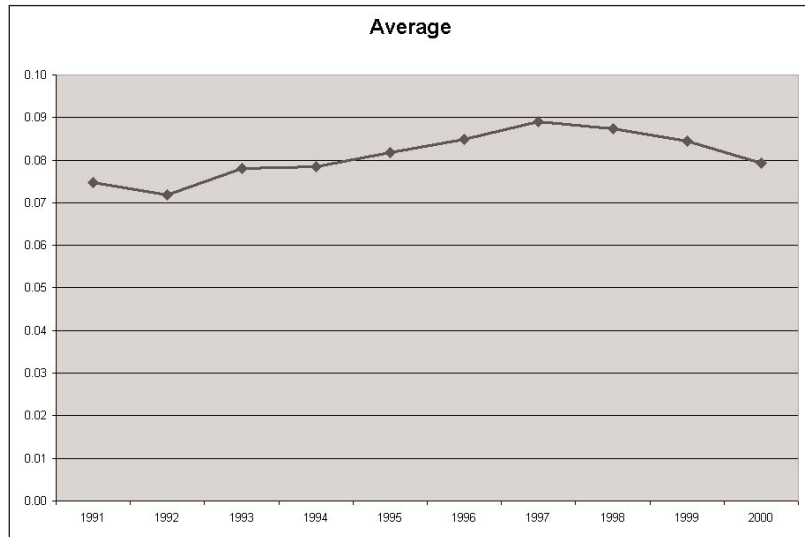
Graphs... (from page 28)

Now use the AVERAGE() function to summarize the values from May 1 to October 31 in each year. The simplest way to do this is to look up the appropriate cell references and type them by hand.

So in B2, we need to type =AVERAGE(I238:I421), in B3 we type =AVERAGE(I604:I787) and so on. After that's all done, select cells B1 through B11 and click the "Chart Wizard" icon again. Click "Line chart" and "Next," then click on the "Series" tab.

Click in the box labeled "Values" and hit Ctrl-C to copy its contents into the cut-and-paste buffer. Then click in the box labeled "Category (X) axis labels" and hit Ctrl-V to paste from the buffer.

Use the mouse (not the arrow keys) to change the cells references \$B\$2:\$B\$11 to \$A\$2:\$A\$11. Then click "Next" twice, select "As new sheet" and click "Finish."



Averaging daily peaks for the smog season produces a clear result.

The resulting graph gives you a clear picture of the long-term trend, which is static at best and may be rising. When we did a similar chart for "Last Gasp," we added two more years of data and were able to show a distinct upward trend that contrasted sharply with trends at monitoring stations in southern California.

The result of that analysis became a central point of our stories: During the 1990s, smog in the San Joaquin Valley had become worse than in Los Angeles. It was a point that we couldn't have made, at least not as convincingly, without the data analysis.

Russell Clemings did a more elaborate version of this analysis for The Fresno Bee's "Last Gasp" project, which is available online at <http://www.valleyairquality.com>.

Scientific duel... (from page 10)

In this case, a positive control would show whether estrogenic effects can be detected in the type of laboratory animals used in the test under the specific experimental conditions used. When the test animals do not respond to the positive control, the whole experiment is usually considered invalid.

Tyl, meanwhile, says the National Toxicology Program's recommendation for a positive control may not apply in the case of BPA. What's more, the mechanism of BPA action on animals hasn't been known until recently, she says.

The claims that BPA could have effects at very low doses are buttressed by a report from a peer review panel convened in 2000 by the National Institute of Environmental Health Sciences. The panel concluded that several studies "provide credible evidence for low-dose effects of bisphenol A. These effects include increased prostate weight in male mice at six months of age and advanced puberty in female mice after *in utero* exposure to 2 or 20 micrograms per kilogram per day."

The panel recommended that the current methods of testing chemicals for reproductive and developmental effects should be revised. But so far the U.S. Environmental Protection Agency and Food and Drug Administration have not modified their testing methods.

In covering this issue, reporters should be leery of studies in which BPA is given to adult animals and no effects are observed. Adults are much less sensitive to BPA than a developing fetus.

Reporters also should be wary of statements about male reproductive success in rodents, which is sometimes measured in the size of litters they produce. Rats are so fertile that males must have a 90-percent reduction in their sperm count before the litter size is reduced. Sperm count is a much more sensitive indicator of fertility in rats than litter size.

In contrast, if a man loses 90 percent of his sperm count, he is very unlikely to be able to produce children.

Also be careful of claims that no deformed mice were born after exposure to BPA. Chromosomal abnormalities in mice would result in resorption of the fetus in the womb — the equivalent of a mouse miscarriage. That mouse fetus would never develop enough to be born.

In humans, chromosomal aberrations most often result in miscarriage very early in pregnancy. In some cases, however, a human baby with chromosomal abnormalities is carried to term and usually has profound genetic abnormalities, often severe mental retardation or Down syndrome. Chromosomal abnormalities are the major cause of death in human fetuses, so if BPA contributes to this, it is indeed a serious health issue.

Bette Hileman, a former science and math teacher, covers endocrine disruption and other environmental issues for Chemical & Engineering News.

The rising tide of technology: Is it too much?

ENOUGH: STAYING HUMAN IN AN ENGINEERED AGE

By Bill McKibben

Holt, \$25.00

Bill McKibben is once again sounding the alarm without fully knowing how to put out the fire; indeed, without seeing much more than smoke. In lesser hands, that would be a problem. In McKibben's, it is not.

In "Enough," his provocative new book, McKibben argues that recent rapid developments in genetic engineering, advanced robotics and nanotechnology have brought us to the brink of becoming what we have never been in the millions of years it has taken us to evolve — machines, forever divorced from human meaning. And we must step back.

"We need to do an unlikely thing: We need to survey the world we now inhabit and proclaim it good. Good enough. Not in every detail; there are a thousand improvements, technological and cultural, that we can and should still make. But good enough in its outlines, in its essentials," McKibben writes.

It is a familiar call for restraint from McKibben, a former staff writer for *The New Yorker* and visiting scholar at Middlebury College. At its heart, it is ethical more than ecological, a prescient plea for humility that this avowed environmentalist has made for years in books and articles on issues from population growth to climate change.

Genetic engineering could produce "designer babies," programmed for height to happiness by keeping-up-with-the-Joneses parents fearing their children will fall behind. A class divide would emerge between those who could and could not afford engineering. And the engineered would never know whether what they think, feel, say or do reflects their nature or design, doomed forever to ask, "Who then *are we*?" McKibben writes.

Advanced robotics is evolving so fast that robots will soon swarm over our lives and, by century's end, overtake us as "silicon passes flesh." Nanotechnology, the miniaturization of technology, is producing even stranger prospects, like "people-scrubbers," powered by body heat, ending the need to bathe. The products of all three technologies could eventually self-replicate and wreak havoc on the planet.

"We would be insane to take risks like this," McKibben writes.

The author notes the technologies are still new, which suggests one possible reason he does not call for a response more pointed than "politics that over time generates the net of regulations, and hence of taboos, that keeps us more or less human." That brand of politics would have us think harder about who we are and what is at stake, recognize we have shown restraint on other problems and be patient with incremental progress. "Taken question by question, this politics will over time yield a working definition of enough."

But his response is better explained by the enormity of the problem itself—nothing short of staying human in an increasingly post-human world. McKibben has always been better read as a direction rather than destination, as a deeply concerned writer willing to ask the big questions without always having the big

answers. He is courageous in his contemplation, one reason he remains so important a writer.

That said, his book could have been stronger. McKibben's concern sometimes gets the best of him, and he becomes strident in ways that might thrill Earth Day revelers but give others pause. He might have shown more of the restraint as a writer he asks of us as a species.

Further, his reporting is at times thin and analysis swift. His examples of restraint in the modern Amish, 15th-century Chinese and 16th-century Japanese are provincial or anachronistic, while he only touches on the better examples of stabilizing the population and climate. And his writing is a little too casual for so grave an issue. The discordance is evident, for instance, in his penchant for pop culture references, from "Seinfeld" to Phish, entertaining eclecticism that broadens his audience but mutes the alarm he sounds over the dark "technotopia" on our horizon.

On the last page, McKibben becomes more artful and poised, recalling an autumn run after finishing the book. He seems finally to exhale, making one wonder how much richer this compelling book might have been, written entirely in this meditative voice.

It was so cold that his fingers stung and lungs ached, McKibben writes. "But it was one of those glorious evenings, when the maple leaves were starting to cascade down at the slightest breeze, a shower of twisting red and orange. A full moon — a harvest moon — stood on the ridgeline. As the sunlight faded and lamps came on in living rooms and kitchens, I could see kids bent over homework, one more night's installment in the long process of building a solid mind. The blue glow of the television filtered out through lots of windows, but so did the smell of good food cooking, as it was cooking in a billion or two homes around the world at the same moment. A neighbor stacked wood on his pile, methodically, with much the same rhythm of bend and lift and twist that a billion or two other bodies had followed that day in rice paddy or workshop.

"Doubtless there was pain and suffering and cruelty behind some of those walls, and just as surely there was joy and kindness, and sometimes in the same places. I ran by shabby trailer homes; some of my neighbors are too poor, and some, perhaps, too rich. To call the world enough is not to call it perfect or fair or complete or easy. But enough, just enough. And us in it."

— Robert Braile



MONKEY DANCING: A FATHER, TWO KIDS AND A JOURNEY TO THE ENDS OF THE EARTH

By Daniel Glick

Public Affairs, \$26.00

At a crisis point in his life, after his brother dies of cancer and his wife leaves him for another woman, Daniel Glick decides he needs to take his two children, Kolya, 13, and Zoe, 9, on an environmental voyage of discovery. Revisiting many of the exot-

(Continued next page)

ic places a younger Glick first saw with his now-absent wife, he alternatively tries to sort out the fact of her departure and forge a relationship with a new female traveling companion – all the while keeping two rambunctious and not always compliant young adventurers in check.

I asked my older daughter, Maya, the same age as Zoe, if she'd want to take a similar trip around the world, visiting places — Australia, Vietnam, Borneo, Nepal, Thailand — that are home to animals she's seen only in picture books.

"No," said Maya, who occasionally expresses interest in environmental issues and certainly loves animals. "Why not?" I asked. "There'd be nothing to eat," she replied. "We'd have to take all our food with us." I started to point out that her current favorite food is from Thailand, but then gave up because you can't win an argument with a 9 year old.

Glick has many such exasperating moments. In Thailand, when good fortune delivers them a night in a luxury hotel, Zoe initiates an epic brawl with her brother over who gets the bigger bed. "It took a long time for her to quiet down, during which time I confess that the impulse to put a pillow over her mouth was almost too strong to resist," says Glick. I admire a father who could write an honest sentence like that.

In Indonesia, the Glicks get an amazing opportunity to watch a family of endangered orangutans in the wild. For kids raised on television, the rare sight is fascinating for about five minutes, after which they want to change the channel. "We had traveled halfway around the world, were sitting about 15 feet away from a bunch of orangutans hanging from branches and stuffing their faces with bananas and pineapples, and they wanted to return to the boat and play some Game Boy inanity called "Frogger."

I've been there, and many of *SEJournal's* readers have probably been there, too. I once pointed out a flock of Canada geese occupying a downtown median strip and my kids looked past the incongruous flock to the golden arches beyond. "McDonald's," they cried.

There are excerpts from Kolya and Zoe's diaries in the book, so we get their perspective as well. The highlight for Kolya is probably the night in Brisbane where he meets a sophisticated "older woman," though smoking dope in Amsterdam probably runs a close second, and he certainly gets a charge out of shooting an AK-47 in Vietnam.

Glick is a pro, whose environmental writing has appeared in *Outside*, *Rolling Stone*, *Esquire*, the *New York Times Magazine*, and many others. As a single parent, he talks here and there about quitting the uncertainties and irregular hours of freelance writing for some more lucrative and stable career, but I didn't believe him: The guy's a reporter to his marrow.

While we're pulled forward by Glick's internal monologues and flashbacks to his previous life with wife Rebecca and brother Bob, we're also treated to some lucid short-form reporting about the plight of tigers in Nepal, the near-extinction of the Javan rhinoceros in Vietnam and the gradual loss of coral reefs in Australia and elsewhere. Maybe as an environmental writer you already knew that a quarter of the world's reefs have already disappeared, but some of the more casual readers of this book will find it astonishing.

Glick doesn't sugarcoat any of these issues; indeed, he states

forthrightly that at the root of many of them is human population growth — a sometimes taboo subject in environmental circles. Meeting an old friend who works on women's and children's issues in Kathmandu, Glick observes, "Especially in the developing world, the correlation between educational attainment for women and lower birthrates, lower infant mortality and increased economic activity is astoundingly clear."

Without progress on population, he adds, we probably won't make progress on saving tigers or rhinos, either.

Like the late Douglas Adams in the wonderful "Last Chance to See," Glick wants an opportunity to get up close and personal with the natural world before many of its jewels disappear from the earth. Unlike Adams, however, he brings the kids along, and that makes it an even more exciting journey.

— Jim Motavalli



IDEAS INTO WORDS: MASTERING THE CRAFT OF SCIENCE WRITING

By Elise Hancock

Johns Hopkins University Press, \$18.95

Let us be clear about one thing: This isn't an "Idiot's Guide to Publishing Science Stories." Long-time former *Johns Hopkins Magazine* editor Elise Hancock has assembled a master's class in science writing, intended for working journalists and J-school students — a concise handbook that can be assimilated on a weekend off or even a round-trip plane flight. Best of all, reading it feels like a lecture from one of your most entertaining college professors — full of practical insights, engaging examples and brief but fascinating digressions.

Like any good journalist, Hancock builds her narrative with facts, but unifies it with a few big themes: (1) science journalism is skyrocketing in importance; (2) science stories affect people's lives and public policy; and (3) good science stories can be found anywhere.

Luck favors the prepared mind, she says. "The best cure for boredom is to find out more, because anything is interesting once you take the right approach. If you find something interesting, never assume that it is not a story. Instead, ask 'How can I get at it?' — and be willing to wait."

The science journalist functions as gatekeeper of knowledge. With more happening in most fields than the human mind can make sense of, this journalist is the last great generalist — learning, synthesizing and conveying what the public needs to know.

Unlike the antagonistic journalist-subject relationships so prevalent elsewhere, Hancock views the work as a partnership between writer and scientist. But be up-front, she warns. "The science writer and the scientist are allies. Structure the deal explicitly as a collaboration of equals, each having a particular expertise." Journalists are the experts when it comes to interviewing, off-the-record findings and crafting statements about the significance of research findings.

Sounds like fun, doesn't it? Not so fast. Now it's time to master the hard stuff, the details of craft that make it such a mad-

(Continued next page)

dening and difficult profession. First and foremost, science writers still need a healthy (read slight) dose of journalistic cynicism — and she’s added a sixth W to the critical who, what, when, where, why, and how: ‘Who funded the study?’

What about writer’s block — the dark matter and subject of innumerable self-help writer’s books? As an editor, she’s predictably unsympathetic — No Such Thing. But then she offers some specific pieces of advice, some of which I’ve never heard before. If they don’t help you pen a last-minute masterpiece, they will at least get the story moving before your deadline.

Here’s a sample:

- “Take out anything portentous. Go straight into what you want to say.” (In other words, Hancock recommends against transitions.)

- “Every good topic contains a ton of story ideas. Most often what’s missing is a specific person around whom to build your story.”

- “Consider reparagraphing, always, for almost any type of problem.”

- “Whenever you are tired is a good time to sweep through looking for easy, near-mechanical corrections, drafts can lose as much as one-third of their length, and three-quarters of their tedium, by simple, mechanical pruning.”

- “Take out or prune every item of which you feel particularly proud. At least, view it with suspicion. Only other writers should notice the high caliber of your writing. The reader should be absorbed in the content.”

- “Find every unaccompanied this, that, these, or those and insert the missing noun. Your prose will sound more literate, while you also clean up the train of thought.”

- Have you been reading too many academic papers? “Look for abstractions. Where possible, rephrase the idea in terms of people, using active verbs.”

- Write with your reader in mind. “Have you lost touch with your reader? What does the key reader want or need to know?”

- “Put anything you want to emphasize in a paragraph’s caboose.”

Like any good journalist, Hancock’s pen may spark debate — even if her subject is writing itself. For example, she recommends interviewing scientists in their offices, and in formal clothing. I beg to differ. I end up interviewing scientists in the field most of the time (in Northern California, that means wearing boots in ankle-deep mud or covered in dust and sweat, sometimes days removed from my last shower). Bars work okay too, in my experience.

She also doesn’t write at all about investigative journalism. Perhaps this is not surprising from an editor of a university magazine. She does not write about confrontational interviews — situations when you can’t always be so accommodating to your interview subjects. Specifically, she doesn’t dwell on the differences between questioning corporate, government and academic scientists.

Less confrontational — but more common — are situations when an expert insists on qualifying every single statement so much it winds up sucking the air out of a hot story. Luckily, Hancock gives great advice on eliciting strong quotes. How often does one get the opportunity to read pointers on interviewing Nobel Laureates?

With a number of brilliantly appropriate excerpts, “Ideas into Words” illustrates science writing as both essential and surprisingly transcendent. She includes excerpts from diverse sources — from *Science News* shorts to John McPhee’s “The Control of Nature,” and from Peter Matthiesen’s *Audubon* features to Sebastian Junger’s best-selling classic “The Perfect Storm.” In each piece, great content is matched to original style. Hancock can’t cover everything in 151 pages, but what is in here is outstanding.

— Jim Rossi

Viewpoint... (from page 4)

events are necessary and even why we’re doing this in the first place — for starters. Then we need to look at the inputs and outputs of events like this. Then we need to apply that scrutiny to our daily lives and our publishing operations.

Just like many of those who attended, I wandered through the halls of the Wyndham Inner Harbor Hotel, gazing at the bright spotlights, the many interesting brochures on the tables lining the Promenade and listening to the thrum of the athletic air conditioning system. And just like many of you, I felt quite hypocritical.

Worse, when I got home, I don’t think there was a single article I wrote that warranted the emission of 2,245 pounds of carbon dioxide into the air — which doesn’t count the tens of thousands of pounds I caused to be emitted through activities besides reading and flying.

Except maybe this one.

Environmental writing — any writing, really — starts with the belief that the story you’re telling is worthwhile. But how you go about it is just as important as the story you tell.

Writing about environmental issues is a good and important activit, and I still believe in it. And consider this: If we’d all stayed home that weekend, we would have used our homes’ and offices’ air conditioning systems, lights, copiers, fax machines, phones, computers and microwaves, and we probably would have driven back and forth to work. Even if we’d teleconferenced for 4.5 days, the manufacturing and laying of fiber optic cable creates carbon dioxide emissions, and I have yet to calculate the carbon dioxide emissions I would have caused if I’d stayed home.

Yes, environmental affairs writers need to lead the way out of the consumption conundrum and we can only do this by being as aware as possible about all humanity’s impacts. Maybe I should have gone to New Orleans this year after all.

A former environment writer, Cameron M. Burns is staff editor at Rocky Mountain Institute, an energy and resource efficiency think tank in Colorado. He can be reached at cameron@rmi.org.

And The Beat goes on

Summer meant ozone and water wars for many reporters

Editor's Note: This is a new variation of a standard feature in the SEJournal, The Beat. Instead of compiling reports by states, SEJournal editors looked for themes of coverage around North America.

Compiled by MIKE DUNNE

Summer time for many environmental reporters meant keeping up with two recurring stories — ozone problems and water wars.

Then there was Superfund spending, the coming forest fire season and stories about new studies on possible gender-bending chemicals and excess nitrogen in the environment.

The battle between water users and endangered species also continued to boil.

The fight over the flow of the Klamath River in Oregon kept federal judges busy while in the middle of the country a similar water war was being waged. On July 16, The Associated Press reported that the U.S. Army Corps of Engineers refused to reduce water levels to protect endangered birds and fish on the Missouri River despite the dictate of a federal judge. The corps said another federal court had ordered it to do the opposite, to keep water for barge traffic and power plant generation needs.

At last check, the endangered species were winning, and the corps said it would ask Congress for \$42 million to restore the Missouri River ecosystem.

The Associated Press also reported on July 18 that a federal judge ruled the government's plan for sharing water between Klamath Basin farmers and threatened coho salmon does not meet the requirements of the Endangered Species Act, but not enough to cut off irrigation for farmers.

By July 23, Michael Millstein of the Portland *Oregonian* reported a federal appeals court had overturned a year-old decision that assured the Klamath Tribes top priority for water. The ruling by the 9th U.S. Circuit Court of Appeals leaves the state Water Resources Department to determine how much water the tribes need to maintain the fish and game they depend on. Farmers were happy with the decision

and considered that it gave them "a level playing field."

Scott Gold of the *Los Angeles Times* had a story about a unique twist in the water wars — someone seeking a permit to keep water flowing down the Guadalupe and San Marcos rivers in Texas. Gold's July 28 story told of the efforts of Texan Dianne Wassenich. "To encourage settlement, Western states have historically treated water, their most precious resource, like any other commodity — one that is bought, sold and traded. So, taking advantage of the same process used to divvy up and divert river water to subdivisions, factories, mines and farms, Wassenich applied for a permit for control of 40 billion gallons of water each year, enough to supply a medium-sized city," Gold wrote. Her plan: leave it in the river. Her application has been denied and her San Marcos River Foundation has filed suit, with an unusual coalition of sportsmen, kayakers, and shrimpers backing her up.

Air pollution

In early May, Jim Bruggers of the Louisville (Ky.) *Courier-Journal* reported that area residents are being exposed to toxic chemicals in concentrations up to hundreds of times higher than the U.S. Environmental Protection Agency considers safe. (see Bruggers report on how he did that story on page 16)

The summer season is also smog season and there were plenty of stories on ozone pollution.

Gary Polakovic of the *Los Angeles Times* reported in July that more sources of pollution and greater growth were undermining gains made in the region's clean air efforts. The first smog alert since 1998 was called in mid-July when the weather turned hot and stagnant. Although days with unhealthy ozone levels had fallen 70 percent since 1976, the trend was going back up and one air official said technology is controlling all it can and other actions may be needed. About 70 percent of the ozone pollutants in the Los Angeles area come from vehicles and non-emission cars and other technologies have not materialized fast enough to keep the trend going, Polakovic reported.

In an earlier *Los Angeles Times* story, reporter Miguel Bustillo wrote that a poll showed Californians are worried about air pollution but don't see their own role in the problem. The poll by the nonpartisan Public Policy Institute of California and the Hewlett, Irvine and Packard foundations said Californians were willing to sacrifice for the environment — but just not their cars and trucks.

The idea of making auto manufacturers make more fuel-efficient vehicles was supported by three-fourth of the people polls. Even a majority of the SUV owners surveyed said they thought their vehicles should compare in fuel-efficiency just as well as other vehicles.

Seventy-three percent of respondents drove alone to work, 62 percent wished to continue driving a vehicle as big as the one they are using now, and 55 percent did not believe that their own cars and trucks were significant contributors to air pollution, according to the survey results reported by the *Times*.

States had until July 15 to submit lists of the counties that fail to meet a new ozone standard that goes into effect next year. The new standard measures ozone concentrations in a rolling eight-hour average that will set a much lower regulatory limit than the old one-hour standard used by the EPA to determine whether an area's air meets Clean Air Act requirements. The old standard allowed up to .12 parts per million of ozone during a one-hour period, the new standard will allow up to .08 parts per million on average across an eight-hour period.

Joseph Gerth of the Louisville, Ky. *Courier-Journal* reported that 10 Kentucky counties and 21 Indiana counties exceed new federal ozone limits and could face air pollution sanctions. One possible result, Gerth reported, is that vehicle emissions tests, which had been dropped by the 2002 Kentucky General Assembly, may have to be resumed. The test used to cost \$11.

In June, Tom Avril of the *Philadelphia Inquirer* reported that Pennsylvania, New Jersey and 31 other states are starting a new, high-tech testing program to curb automobile pollution.

For cars made since 1996, the states won't even measure the pollution from the tailpipe but instead a mechanic will plug into the vehicle's on-board computer and check for error codes that tell of any problems with the car's equipment that might cause pollution. The new test, mandated by the EPA in states with dirty air, is supposed to be quicker, cheaper, and better for the environment.

On July 28, Eric Pianin of *The Washington Post* reported the Bush administration agreed to reconsider provisions of the new air pollution regulations in response to legal pressure from state attorneys general and environmental groups. "The decision represents an extraordinary retreat by the Environmental Protection Agency, which had announced 'final' revisions to the Clean Air Act's 'New Source Review' enforcement policies last New Year's Eve that would enable tens of thousands of smoke-stack plants and refineries to update or expand their facilities without having to install expensive anti-pollution equipment."

Nine northeastern states ranging from Maine to Maryland filed suit claiming the administration's rule-making far exceeded its legislative authority and would neutralize one of the few effective programs for combating industrial pollution and dirty air.

On another front, the House Commerce Committee's Energy and Air Pollution Subcommittee held hearings in Washington in an effort to give EPA the authority to grant extensions to meet the Clean Air Act ozone standards based on the idea that some violations may have

been caused by ozone drifting into a non-attainment area. The committee heard from Baton Rouge, La. Mayor Bobby Simpson, whose city had been granted an extension by EPA based on the "ozone transport" policy. EPA later revoked the extension after losing several rounds in court where environmental groups challenged the EPA's authority to grant such extensions, according to an article in the *Baton Rouge Advocate* on July 23. Republican Congressman Richard Baker's office told the newspaper that the committee felt ozone transport was a real issue and there was bipartisan support to give EPA the authority to grant such extensions. Simpson told the committee being "bumped up" would cost motorists in the five-county Baton Rouge area as much as \$72 million a year for reformulated gasoline and industries that would likely violate new lower pollution limits could pay as much as \$100 million in fines.

On July 3, Theo Stein of the *Denver Post* reported that the peak of the ozone season hadn't even arrived and the city was only two bad air days away from violating the air standard. It just took a few more days to experience two more bad air days and now the city, which was one of the few meeting Clean Air Act standards on six tests, now fails the ozone standard.

Mercury

There were lots of stories focused on mercury pollution.

Joan Lowy of Scripps Howard News Service wrote in early July that the Food and Drug Administration is rewriting its warnings about eating mercury-contaminated fish but won't release that advisory until it meets with seafood representatives and other "stakeholders." The goal is to have a draft advisory by Sept. 30 saying which species of fish are high in mercury and how much fish can safely be eaten.

The FDA said its decision to review the advisory was not related to a new international safety standard on mercury adopted by the World Health Organization. That new standard is twice as tough as the one the FDA uses to calculate how much mercury-containing fish is safe for sensitive populations like women of childbearing age and young children to consume.

On July 3, Liz Halloran of the *Hartford Courant* reported that Connecticut had a new law that will require the state's coal-burning power plants to greatly reduce mercury emissions in five years. It is being hailed as the first legislation of its kind in the nation — the product of an unusual collaboration between environmentalists and an energy company.

In June, Lee Bergquist of the *Journal Sentinel* in Milwaukee reported that Wisconsin's Department of Natural Resources is proposing regulations that would for the first time clamp down on mercury emitted from utility smokestacks. Again, the idea is to reduce mercury in fish, making them safer to eat.

Meanwhile, in Canada, Martin Mittelstaedt of the *Toronto Globe and Mail* reported Canada's environment ministers are considering ordering coal-fired power plants to cut mercury emissions by as much as 90 per cent because of concern about learning disabilities in children. Environmentalists see the proposal as a major development and say it could force some utilities to close their coal plants and convert them to cleaner fuels.

Estrogen, other pollutants

Other pollutants continued to make news.

Knight Ridder's Seth Borenstein reported in late June that Canadian scientists had put birth control pills into a remote lake in Ontario and feminized the

Awards... (from page 22)

Small-Market Reporting — Broadcast:

1st: "Baldwin Park," by Sarah Bennett, KOZK-TV, Springfield, Mo., for a documentary on a community park built over an old toxic landfill.

2nd: "DNR Breakdown," by Bob Segall, WITI-TV, Milwaukee, Wisc., for investigating a series of environmental enforcement lapses, which ultimately prompted federal authorities to move in.

3rd: "Birds or Barges?" and other stories by Carolyn Johnsen, Nebraska Public Radio, for reporting with "depth and clarity" on ethanol pollution and corporate farming's impact on water quality.

Small-Market Reporting — Print:

1st: "Critical Mass," by Eric Frankowski and Bruce Plasket, *Longmont (Colo.) Daily Times Call*, for investigating the varied aspects of nuclear contamination, including the human impacts.

2nd: "Wolf at the Door" and other stories by Ray Ring, *High Country News*, for "informative and entertaining" writing on how human development continues to encroach on wildlife.

3rd: "New Frontiers in Environmental Research," by Lila Guterman, *The Chronicle of Higher Education*, for "vivid stories about our often lethal impact on wildlife."

male fish, sending the population of flat-head minnows crashing. All male fish in the lake, from tadpoles to trout, were “feminized,” meaning they had egg proteins growing abnormally in their bodies, Borenstein reported.

The experiment was intended to match the impact female hormones like estrogen may have on many American bodies of water contaminated by municipal sewage system wastewater containing estrogen residue from birth-control pills. The research has increased concerns that human female hormones may be hurting wildlife, said several scientists in the U.S. government.

Marla Cone of the *Los Angeles Times* also wrote about research in the Midwest discovering men with elevated exposures to alachlor, diazinon and atrazine are dramatically more likely to have reduced sperm quality. The study is the first to show such a link for common pesticides still being used. Since the most likely route of exposure is through drinking water, the finds are even more troubling, according to the June 18 story.

On June 27, Cone reported on research published in the *Lancet* that linked a mother’s DDT level at the time of birth of her daughter to the daughter’s reproductive health three decades later.

In a related vein, *Newsday’s* Dan Fagin reported that a Long Island-based study found no evidence that electromagnetic fields from household wiring, appliances and power lines cause breast cancer. Fagin’s report said the study was the largest and most sophisticated of its kind.

The study results are another blow to a group of local women whose activism persuaded Congress 10 years ago to earmark \$20 million for a set of studies known as the Long Island Breast Cancer Study Project. Earlier this year, Fagin had a series of stories on the controversial results of that study.

An outbreak of monkeypox in the Midwest had some reporters writing about the enforcement of laws controlling exotic pets, or the lack of enforcement. Some states were also looking at strengthening state laws regarding exotic critters

Monkeypox is similar to small pox and has been linked to prairie dogs and giant Gambian rats. Pat Sawyer of the Jackson, Miss. *Clarion-Ledger* reported about the laws in place in Mississippi

and the lack of enforcement in her July 15 article.

“In spite of the fact we have a requirement that all animals that come into our state must have a health certificate, it’s very difficult to regulate that,” said Jim Watson, a veterinarian and head of the state Board of Animal Health.

Nitrogen

The New Orleans *Times-Picayune’s* Mark Schleifstein reported June 23 that a plan to reduce nitrogen flowing into the Gulf of Mexico to reduce the summertime “dead zone” is lacking. NOAA scientist Donald Scavia wrote in the May issue of *Limnology and Oceanography* that nitrogen will have to be cut by between 40 percent and 45 percent to reduce the dead zone to an average 2,000 square miles along the Louisiana coast.

Excessive nitrogen, primarily from farm fertilizer runoff in the upper Mississippi River basin, causes algal blooms greater than can be consumed by fish. When the algae die and sink to the bottom, the deterioration consumes most of the oxygen in the water column, killing those organisms that can’t flee.

While the 30 percent reduction is a good first step, Scavia said, it should result in a dead zone of between 2,560 square miles and 5,120 square miles, based on the model he used to reach his conclusions. Last year, the dead zone was estimated to cover about 8,000 square miles of the Gulf of Mexico.

Schleifstein and the *Baton Rouge Advocate* both reported on researcher Nancy Rabalais’ latest study of the annual “dead zone” in the Gulf of Mexico. An unusually busy early hurricane season helped keep the size of the problem down. Tropical Storm Bill and Hurricane Claudette both stirred the waters of the Gulf, mixing the low-oxygen water at the bottom of the water column with more oxygenated water on the surface to cut the size of the dead zone in about half of the average for the past few years. This year, several large patches of hypoxia total 3,300 square miles.

Schleifstein also reported on June 23 that excessive nitrogen is not only a problem for Gulf critters, but might be threatening human health in unexpected ways, according to a study by 14 scien-

tists in a variety of environmental and health-related fields.

“We’re beyond the realm of uncertainty at this point that human acceleration of the nitrogen cycle is clearly something that’s happening globally and that there’s a wide range of environmental consequences,” said Alan Townsend, an assistant professor of ecosystem ecology at the University of Colorado at Boulder and lead author of the study, “Human Health Effects of a Changing Global Nitrogen Cycle,” published in the June edition of *Frontiers in Ecology and the Environment*.

Superfund, forests

Superfund continued to make summertime news as the administration released lists of projects that would be funded.

Chuck Plunkett of the *Denver Post* reported July 17 on one of the projects funded — the cleanup of arsenic and lead from the lawns of 141 homes in five Denver neighborhoods. The project received \$3.5 million of the \$49 million released by the Superfund to start the cleanup of waste sites in nine states.

There were also plenty of stories about forest fire season and debate over whether plans to thin forests were for fire safety or just a good excuse to log.

One series of stories on the forests actually arose from a famous fire seven decades ago — the Tillamook Burn in western Oregon.

Daily Astorian reporter Brian Romero wrote a five-day series on the future of the Clatsop and Tillamook state forests in western Oregon 30 years after the timber lands became state forests and 70 years after the big fire.

The series looked at the broad range of people who come to the forests for play and how they use the forest, how timber harvests from state lands still play a critical role in Northwest Oregon economies, at environmentalists’ skepticism of the state’s ability to balance recreation and wildlife habitat with logging, and how different users are trying to set the agenda for years to come. The series began Friday July 11 and picked back up July 14-17.

Mike Dunne, a reporter for The Advocate in Baton Rouge, La., is assistant editor of the SEJournal.

Air quality... (from page 28)

Photo courtesy of THE FRESNO BEE/Mark Crosse



Poor air quality obscures downtown Fresno's skyline.

cils. The industry lobbies often fund board members' campaigns for re-election.

Does the public have that kind of representation? No, not really. The public is not only confused by the process, but it is rarely even at the table.

That's why it is so crucial for reporters to find a way into this story, especially in California and the West.

As in many complex and intense environmental issues, activists and the health community pry the issue open for public scrutiny, often with lawsuits. They have found their voices in the San Joaquin Valley but only in the last four years. I could have accessed the story 10 years ago without environmentalists, but I probably would have looked in Los Angeles and San Francisco to talk with the Sierra Club and other organizations to discover the issues they were pressing at that time.

One last piece of advice and, possibly, another starting point: Ask your local air management district for the list of violation notices that have been sent out in the past year. Also ask for a list of businesses and other stationary sources that have an air pollution operating permit on file with the local district. Determine how many fines have been assessed; figure out the average fine and take a hard look at the type of industries being fined.

It will give you a good indication of how enforcement is being handled in your area and how much political strength industries are wielding among local elected officials.

If you think you have a good story, compare the statistics to other areas and start attending the local air board meetings. It's well worth the challenge.

Mark Grossi writes for The Fresno Bee.

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Society of Environmental Journalists

P.O. Box 2492

Jenkintown, PA 19046

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