



SPRING 2007

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THE TIME IS NOW

Global Climate
Change and What
We Can Do About It

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DEAR RIVERKEEPER SUPPORTERS,

Last month, the *New York Times* published an article summarizing the Intergovernmental Panel on Climate Change's latest report on the likely effects a warming planet will have on ecosystems, food and water supply, human health, and our fellow species ("Top Scientists Warn of Water Shortages and Disease Linked to Global Warming," March 12, 2007).

The forecast is nothing short of apocalyptic, especially if we fail to start substantially reducing our carbon emissions now. Based on what we know already, hundreds of millions of people, mostly in developing countries, could face water shortages by 2025 — well over a billion people by 2050. Within just a couple of decades, tens of millions of people will be flooded out of their homes each year. By 2080, hundreds of millions of people could face starvation.

By 2050, polar bears will be all but gone from the wild. (I will never be able to erase from my memory the harrowing image on the front page of the *Times* of an emaciated starving polar bear stranded on a similarly emaciated iceberg.) In another recent IPCC report, scientists predict that climate change could wipe out approximately one-third of all species on earth by mid-century.

The grim news keeps getting grimmer and has now reached the point of being beyond our ability to fully comprehend it. I have been an environmentalist my entire adult life and have always been able to more or less compartmentalize my understanding of how we are daily poisoning ourselves and the rest of the species with whom we share this beautiful planet. But global warming is different. In the past year, the climate change issue has overtaken my ability to protect myself psychologically. The issue pervades my thinking and imbues me with a persistent and unshakeable sense of foreboding and dread.

The idea that humans — the most sophisticated and creative species our universe may ever know — have been knowingly destroying the only home we have, is profoundly distressing. I suspect we are only just beginning to experience the psychological toll that the unfolding reality of what we've done to ourselves will ultimately have on the human race. It is the unspoken and as yet unaddressed consequence of climate change.

I believe that we can and will rise to the challenge and work to apply the human spirit and ingenuity necessary to arrest a continued buildup of carbon in the atmosphere and avoid the worse case scenarios we face. We simply have no choice. Our physical and psychological welfare depends on our coming together — as a state, as a country, as a global community — to solve this problem, and quickly. In fact, I predict that this issue will be what helps the people of this fractured nation overcome our differences and unite to reclaim our integrity as a nation and our role as a world leader.

In this issue of *Riverkeeper*, we have reprinted from the Natural Resource Defense Council's website a Question and Answer piece which provides an excellent overview of the climate change issue from a global perspective. Also courtesy of NRDC — a leader on the climate change issue — we have included a summary of the things you can do to help reduce our carbon footprint, as well as a list of resources you can use to learn more and get more involved. In the fall issue of *Riverkeeper*, our feature story will focus on the impacts climate change likely will have on the northeast United States, particularly the Hudson Valley and New York City region.

One final note: *Riverkeeper* is not going to take on climate change as an issue. We have plenty to keep us busy protecting the region's water resources and shutting down Indian Point. However, I firmly believe that every environmental group across the nation should do something to help this cause. For *Riverkeeper*, the best way we can help is to inspire and mobilize you, our members, to take action and to encourage everyone you know to do the same. This is *the* issue of the 21st century and beyond, and all of us need to do our part. Who better to lead than the highly sophisticated and energetic people we are lucky enough to call our members?

— Alex Matthiessen, *Hudson Riverkeeper & President*



Riverkeeper is the official publication of Riverkeeper, Inc., an independent, member-supported environmental organization. Founded in 1966 by fishermen and community members to confront polluters for control of the Hudson River, Riverkeeper has investigated and successfully prosecuted more than 300 environmental lawbreakers and has guided the establishment of 156 Waterkeeper programs across the nation and beyond. Riverkeeper is a registered trademark and service mark of Riverkeeper, Inc. All rights reserved.

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Cover art: Global climate change already affects our environment with extreme weather, droughts, hotter temperatures, and melting glaciers, leaving polar bears and other creatures struggling to survive.

Watershed news is an update of Riverkeeper's efforts to protect New York City's drinking water supply.

Riverkeeper Investigates

BY WILLIAM WEGNER

Believing that protecting the water supply at its source through watershed protection programs is the best means of safeguarding water quality, Riverkeeper has questioned and opposed the need for costly filtration of the NYC water supply. But we cannot blindly assume that the water supply will always remain pristine.

THE QUESTION: Is Our Drinking Water Really Safe?

The high quality of the NYC drinking water supply is world-renowned. Because the supply continues to meet all health and water quality standards, the City of New York has received waivers from federal requirements that would otherwise require filtration of the water supply.

Over the past hundred years, the tunnels that carry drinking water through New York City's distribution system have developed a substantial layer of biofilm – an aggregation of microorganisms. These microorganisms secrete a protective sticky compound on the tunnel walls. Many organic contaminants which are suspended or dissolved in the water passing through the tunnel, then adhere to the biofilm.

Contaminants from a wide variety of sources may be found in this biofilm. They enter surface waters through stormwater runoff, wastewater treatment plant effluent, illegal discharges of waste, and even from the atmosphere. Stormwater scours oil, gasoline and road salt from roadways and transports them to nearby streams or reservoirs. Runoff also carries pesticides, herbicides, and the phosphorus in fertilizer from lawns and farms to receiving waters. Vehicle emissions and Polychlorinated Biphenyls (PCBs) can vaporize from soils or from one waterbody only to be redeposited in another waterbody. In recent years, the amount of pesticides

PHOTO COURTESY OF ISTOCKPHOTO.COM

Quality of New York City Tap Water

applied throughout the United States has reached nearly one billion tons per year. New York State has experienced intense pesticide application, particularly in the counties that comprise the East-of-Hudson watershed. For example, Westchester County reported the application of more than one million pounds of pesticides in 2003.

So, what is really in the biofilm? And, is our drinking water really safe? Because Riverkeeper is concerned with the quality of tap water as well as the quality of the surface water supplies that travel to the tap, the Watershed Team has been investigating the answers to these important questions.

INVESTIGATION **Phase I: Volatile Organic Compounds**

Last year, we began a preliminary investigation to follow up on a confidential report by New York City Department of Environmental Protection (DEP) chemists who identified more than 1,000 organic contaminants in the City's water tunnel biofilm. From the report, we identified three Volatile Organic Compounds (VOCs) – benzene, Polycyclic Aromatic Hydrocarbons (PAHs), and carbon tetrachloride – that were present in the biofilm samples in concentrations much higher than the Environmental Protection Agency's (EPA) Maximum Contaminant Level (MCL) for drinking water supplies. While

this may sound alarming, it is not necessarily an immediate cause for concern. Because the biofilm acts as a repository for contaminants, concentrations will be greater in biofilm than in the water carrying these compounds. VOCs can have long- or short-term human health effects. These range from headaches and nausea, to cancer, liver, kidney and nervous system damage.

Our first goal was to determine whether any of the more prominent biofilm contaminants were reaching the City's drinking water consumers. During the summer, we received sample bottles from New Jersey Analytical Laboratories and sampled tap water that was delivered from both the East- and West-of-Hudson reservoir systems to residences in New York City.

We are pleased to report that after screening the samples for 84 VOCs, the lab analysis detected only two. Both of these compounds were Disinfection Byproducts (DBPs) that are created when the chlorine added during the disinfection process reacts with dissolved organic carbon in the raw water. The EPA has established an MCL for DBPs in drinking water supplies to ensure that the water poses no short-term or long-term health risks. Fortunately, the tap water we tested from both East- and West-of-Hudson watersheds contained DBPs in concentrations that were below the MCL.

Many of the chemical pesticides that are present in our waterways are hazardous to human health.

PHASE II: Pesticides and Herbicides

For the second phase of our consumer water testing, early last fall we sampled Croton source tap water for pesticides and herbicides. This testing was staggered with the VOC testing to allow enough travel time for the chemicals to reach the distribution system in runoff from lawns and gardens treated last summer in the urbanized areas of Westchester and Putnam Counties. Many of the chemical pesticides that are present in our waterways are hazardous to human health. Insecticide constituents such as organophosphates have been linked to brain and nervous system damage, respiratory paralysis, liver, kidney and adrenal pathology, and even death. Children are especially susceptible to the effects of pesticides in the environment, and newborns can be more than a hundred times more vulnerable than adults to the effects of certain organophosphates.

We were relieved to discover that the laboratory analysis of our City tap water sample for 11 common carbon-based pesticides and herbicides detected none of the compounds. These results are encouraging. However, we believe that the DEP could provide more detailed sampling data.

The absolute extent of pesticide contamination of the City's watershed remains uncertain. While the DEP monitors source

and distribution waters for pesticides, the Department has not always been forthcoming with the results of its monitoring. In 2001, Riverkeeper received a copy of a DEP laboratory report from an anonymous source. It contained an analysis of pesticides that are regulated under the Safe Drinking Water Act (SDWA). These pesticides were detected in the City watershed samples collected by the DEP on November 17, 1999. Twelve of the water samples contained five pesticides in amounts that exceeded the EPA's MCL for drinking water supplies. Then, pursuant to a Freedom of Information Law (FOIL) request from Riverkeeper to the DEP for monitoring results of source and distribution water for pesticides, the DEP responded in writing that "no analyses of SDWA pesticides were conducted during the three month period October 1999 through December 1999 for either source or distribution water."

In December 2006 we filed another FOIL request with the DEP to review long-term departmental records of pesticide testing in order to scrutinize a broader database for contamination.

We are hopeful that our review of this information will support our independent findings so that we can confirm that watershed protection programs are keeping our unfiltered drinking water supplies safe for consumers. ■

Looking Ahead:

CAN NEW YORK CITY CONTINUE TO AVOID FILTERING ITS WATER?

BY LEILA GOLDMARK

The federal Safe Drinking Water Act requires operators of public drinking water systems to filter drinking water supplies. However, because water in the New York City system is high quality and meets existing federal and state water quality standards, the U.S. Environmental Protection Agency (EPA) allowed the City to avoid building a multibillion dollar filtration plant for the Catskill/Delaware system in exchange for implementing a variety of protection programs to protect source waters throughout the NYC watershed. In 1997, the Filtration Avoidance Determination (FAD) was issued along with the Watershed Memorandum of Agreement that laid out the details of the protection programs required by the FAD.

The first FAD was revised and renewed in 2002, but is set to expire in April 2007. We anticipate that the FAD will be extended for another five-year period and this provides another opportunity for Riverkeeper to push for stronger protection programs and higher program targets. Since mid-2006 the Watershed Team has been preparing for upcoming FAD negotiations, meeting with other environmental groups, watershed stakeholders, and federal and state regulatory agencies.

The Department of Environmental Protection (DEP) sub-

mitted its Long-Term Watershed Protection Program report to the EPA in late December 2006, but the EPA had not yet released draft language for the 2007 FAD at the time of this writing. Nevertheless, we will be working to ensure that priority items are addressed in the FAD. A chief concern will be securing adequate funding and staff for the New York State Department of Health (NYS-DOH), which will assume “primacy” from the EPA and take on the primary responsibility for monitoring the City’s implementation of watershed protection programs and enforcing the FAD. In addition, we will continue to advocate for expansion of certain protection programs to the East-of-Hudson Cross River and Croton Falls Reservoir basins (which, at times, can feed into the Catskill/Delaware system); permanent measures to control turbidity in the Schoharie Reservoir and Esopus Creek; a more aggressive land acquisition program that better utilizes local land trusts; and a stepped-up timetable for completion of overdue system upgrades and repairs.

A strong 2007 FAD can save the City and ratepayers billions of dollars while protecting the environment and quality of life for watershed residents. Riverkeeper will remain vigilant and make sure that NYSDOH is a diligent enforcer of the FAD, just as we push the DEP to



PHOTO COURTESY OF CAROLYN NEWBARK

ASHOKAN SPILLWAY IN THE CATSKILL WATERSHED.

diligently enforce the rules and regulations throughout the watershed.

Riverkeeper believes that watershed protection programs and partnerships can protect our drinking water supplies over the long term. To keep the City on track, starting in

2007 Riverkeeper will issue an annual Report Card assessing the City’s compliance with the FAD. To check for the Report Card or learn more about the FAD and watershed protection programs, please visit: <http://riverkeeper.org/campaign.php/watershed>. ■

■ BELLEAYRE RESORT AT CATSKILL PARK

In 2005, Riverkeeper and the Catskills Preservation Coalition (CPC) achieved a great victory when a New York State Department of Environmental Conservation (DEC) Administrative Law Judge (ALJ) issued a ruling that 12 issues concerning the Belleayre development proposal required additional inquiry and would be examined in full adjudicatory proceedings. Last year, the CPC defended our victory against the developer's appeal of all the issues. In a last-hour ruling on December 27, 2006, the DEC Deputy Commissioner issued a decision on the appeal, overruling the ALJ on six issues but holding six other issues over for adjudication. While significant issues concerning water quality and supply will move forward, the CPC will move to reargue several other issues involving cumulative growth and forest preserve impacts. In the meantime, the CPC will continue ongoing settlement discussions with the developer. We will continue to fight for an alternative project like that proposed by U.S. Representative Maurice Hinchey (D-NY) – an alternative that permanently protects the pristine eastern parcel while allowing a significantly down-sized project to proceed on the western parcel. Such an alternative will safeguard the environment while bringing appropriate economic development to the Catskills region.

■ MEADOWS AT DEANS CORNERS

Riverkeeper achieved a hard-fought victory in its long-standing battle to have additional information included in the environmental review of the proposed Meadows at Deans Corners project. Having lost our case before the State Supreme Court, we were elated when the Appellate Division found in our favor on appeal, ruling that the Southeast Planning Board had failed to take a "hard look" at impacts arising from changed circumstances since the State Environmental Quality Review Act (SEQRA) review process started over 14 years ago. Requests by the developer and planning board to the Appellate Division for leave to appeal to New York's highest court were denied. Riverkeeper is confident that this request will again be denied by the New York Court of Appeals and that the Appellate Division's order to prepare a Supplemental Environmental Impact Statement (SEIS) will stand.

■ KENT MANOR

The project sponsor for a proposed 318-unit condominium development on 106 acres in the Town of Kent completed a Final Environmental Impact Statement (FEIS) for the project in 1987, but did not seek final approval for the project until 2005. In the 18 years since this environmental review began, numerous regulatory and other changed circumstances have occurred, including the Watershed Rules and Regulations instituted as part of the 1997 Memorandum of Agreement, Total

Maximum Daily Load determinations for phosphorus reduction in East-of-Hudson reservoirs, and likely site alterations. In light of these changes, Riverkeeper successfully petitioned the lead agency (formerly the Kent Town Board and now the New York City Department of Environmental Protection) to require the developer to prepare an SEIS to address potential impacts under the current regulatory constraints. The SEIS was released in January and was under review by Riverkeeper at the time this update went to press.

■ PATTERSON CROSSING

As currently proposed, the Patterson Crossing development encompasses some 90.5 acres of undeveloped, variable-grade forest and meadowland within both the Towns of Patterson and Kent. Proposed construction includes a variety of commercial retail buildings totaling nearly a half-million square feet, several thousand parking spaces and a series of septic tanks leading to a nearly nine-acre disposal field. Because of its enormous size, Riverkeeper believes that runoff from the site will threaten the utility and viability of adjacent wetland areas and water-courses which ultimately drain to both the Middle Branch and East Branch Reservoirs. In September, we outlined our concerns in comments on the Draft Environmental Impact Statement (DEIS). We will continue to oppose the scale and configuration of the project throughout the review process.

■ GRANITE POINTE

In 2002, preliminary approvals were granted for the proposed Granite Pointe project, a 29-acre housing subdivision located on a forested peninsula jutting into the Amawalk Reservoir in the Town of Somers. Because of its relatively small size, Riverkeeper had not participated in the initial SEQRA review process for this project. However in 2003, Somers residents presented us with new information regarding possible lead contamination on the site due to its former use as a skeet-shooting range. With Riverkeeper's help, the Somers Planning Board was persuaded to rescind approvals and reopen the SEQRA process. The project applicant was required to conduct additional on-site testing and, when lead contamination was found, present a remediation plan in a draft SEIS. In late 2006, Riverkeeper submitted comments on the draft SEIS, which contained inadequate data gathered from poor sampling locations and methodology, and failed to examine possible contamination of adjacent DEP-owned land. The DEP conducted its own testing and found significant contamination that also will have to be removed from town property. Riverkeeper will continue to advocate for permanent preservation of the Granite Pointe site, particularly purchase by the DEP so that fully-coordinated remediation of both parcels can proceed. ■

Spiritual Connections to Protect the River

BY LISA RAINWATER

"Children in New York City are unable to see the stars in the sky at night due to light pollution. This disallows them from connecting with the greater universe."

— Rabbi Lawrence Troster, Director, Fellowship Program, GreenFaith

When I traveled back to Wisconsin for the holidays and slept in my father's home settled within a forest, I realized perhaps for the first time just how profound Rabbi Lawrence Troster's statement was. A city dweller myself, it had always troubled me that more often than not I could barely locate the moon, let alone witness the pinpricked night sky that is our universe. Seeing the beautiful velvet horizon, with all its constellations and brilliant lights shimmering across the farmlands, I realized just what many of us living next to urban centers are missing from our daily lives: a greater connection to the universe.

Riverkeeper doesn't focus

our attention on light pollution. There are many dedicated groups working on this issue. Our focus is the Hudson River and its watershed. But be that as it may, Rabbi Troster is on to something. Seeing the night sky alit in all its beauty reminds you that you are part of a greater cosmos – and that that cosmos is part of you. It is this deep connection with the universe as a whole that is starting to shake things up across the country, and if we're lucky, in Washington politics as well.

When you ask someone why they want to help protect the Hudson River, you'll get a kaleidoscope of answers: to preserve our heritage, to bring the fish back, to have something to hand over to our children, to


be part of a community, to have a place to swim again someday, to stop being the joke of the nation, to keep people healthy from pollutants.

"Because we are stewards of God's creation" is an answer that is prominent among many residents living along the River and has most recently made a strong presence in discussions and action plans for religious and spiritual communities in the Hudson Valley.

The United States is entering a monumental paradigm shift in terms of who is taking the lead in protecting the environment, addressing global warming, and changing our damaging lifestyles into sustainable living. A couple of years ago, Evangelicals

denounced global warming as a threat to our way of life. Now, leaders in the Evangelical movement are speaking out about the perils our planet is facing, and will continue to face, if we don't act quickly to change our behaviors and become "true stewards" of the Earth.

Vice President Al Gore's documentary *An Inconvenient Truth* has played a large role in this shift. In the summer of 2006, the national organization Interfaith Power & Light spearheaded *The Regeneration Project* (www.theregenerationproject.org) to bring the film to religious and spiritual communities. With an original goal of 1,500 congregations in twenty states, the group far exceeded their



target: over 500,000 people in over 4,000 congregations in all fifty states saw *An Inconvenient Truth*. In January 2007, an alliance of twenty-eight Christian evangelical and scientific leaders stood together at a news conference urging President Bush and Congress to adopt “fundamental changes in values, lifestyles, and public policies required to address these worsening problems [climate change] before it is too late.”

While this nationwide move was slowly making its way across the states, a shift had already begun in the Hudson Valley. Just as the environmental movement was born in the Hudson Valley during the 1960s, a new movement was breaking over the waves of the Hudson River. For almost two years, a groundbreaking partnership between environmental and spiritual communities has been fostered in large part due to the tremendous efforts put forth by the Garrison Institute and the Rev. Patricia Ackerman, Director of the Hudson River Project.

Over the last two years, Riverkeeper has been active in the Hudson River Project. The

project is a place-based initiative that focuses on the sacredness of the Hudson River estuary system with the goal of bringing together diverse religious and environmental leaders with their communities in a unified coalition to work on behalf of the River.

The first year of the project was to get the Hudson Valley talking about issues important to the restoration and preservation of the Hudson River Valley. It was a great success, with thousands of religious and environmental community members attending twelve conversations based on the Department of Environmental Conservation’s Hudson River Estuary Program’s Action Agenda.

Out of these conversations a *Statement of Shared Values and Committed Actions* was developed. It is a living document that is being distributed to religious and environmental communities throughout the Hudson Valley for sign-on.

In conjunction with these citizen actions, the Garrison Institute is developing a series of workshops that highlight the

work already being done in centers of worship and the corresponding work of Hudson Valley environmental groups.

The first of the series was held at the Institute in early December before a diverse audience representing spiritual leaders from the Jewish, Christian, Buddhist, American Indian, and Baha’i faiths. Speakers such as Sister Nancy Erts of Mariandale Center in Ossining, Candace Downing of the Baha’i faith, and Rev. Frank Geer of St. Philip’s Church in Garrison shared experiences from their respective faith-based communities and offered suggestions on how their initiatives could be replicated throughout the Valley.

Representing the environmental community, I shared with attendees Riverkeeper’s *Reenergize New York Campaign* and presented hands-on actions that spiritual and religious leaders could take back to their houses of worship the following week.

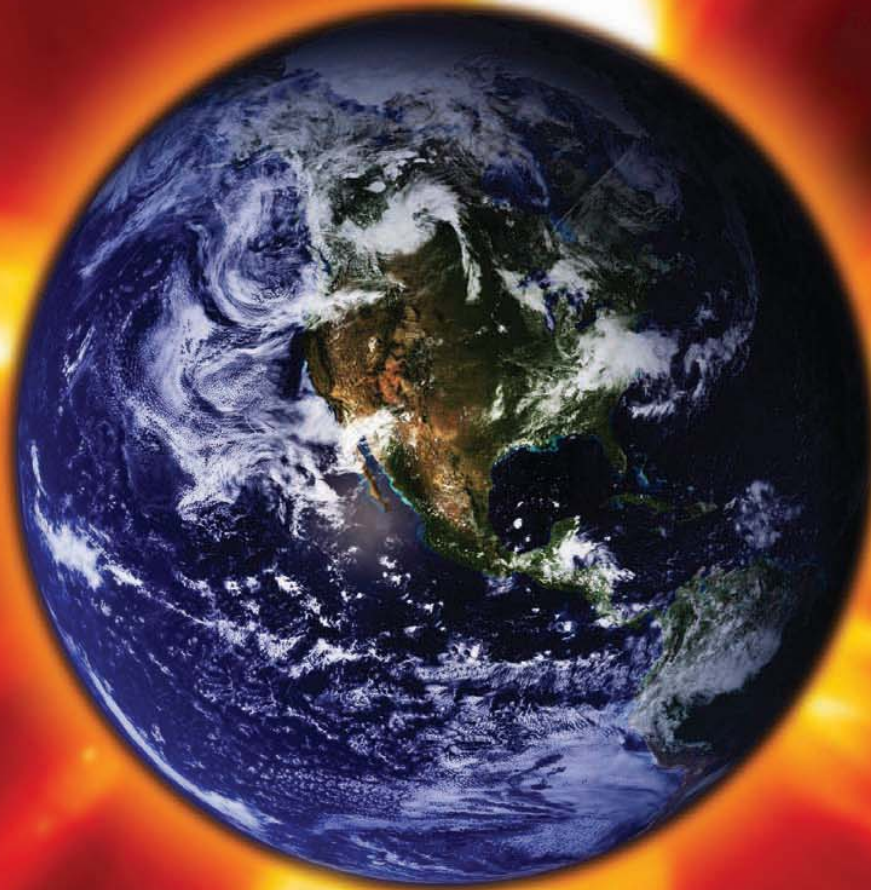
The excitement and fervor in the room over the various presentations that took place were felt amongst all attending.

Rev. Ackerman was pleased with the attendance and the commitments she received from several attendees. “As we join together to face our environmental crisis, we are seeing how shared contemplation and exploration of the deeper values we hold in common can lead to a broad-based movement to bring about urgently needed change in the world. The Hudson River Project network deepens our connection to one another, and shows how our beliefs can transform human behaviors and lead to more positive outcomes for the earth community.”

Throughout the year, citizens will be bringing this Statement to their centers of worship, working to get their synagogues, congregations, mosques, and temples to sign onto the Statement and to commit to taking action to repair, restore, and protect our environment.

If you would like to get involved, please contact Riverkeeper or the Garrison Institute. Materials are posted on our website at www.riverkeeper.org ■

THE TIME IS NOW: GLOBAL CLIMATE CHANGE AND WHAT WE CAN DO ABOUT IT



The reality of global climate change is now beyond dispute.

Even Exxon Mobil, the world's number one environmental polluter, has conceded it's happening (*though not surprisingly the company is still trying to delay a meaningful American response*).

This is the greatest challenge that our generation, or any other, has ever faced. If we don't confront climate change aggressively by committing ourselves to steep reductions in carbon emissions over the next 20 years and beyond, our children and future generations will pay dearly. If we stay on our current collision course, they will inherit a society and planet that is unrecognizable. > >

If we hope to make a significant dent in what now – with creepily warm weather and an increase in violent storms – feels inevitable, we will all have to do our part, by turning up the thermostat in the summer (and down in the winter), driving fewer miles, buying more fuel-efficient cars and appliances, making public transportation a routine part of our lives, and relying increasingly on goods produced locally. But the most important thing you can do to stop global warming is support the imposition of a federal tax on all forms of carbon emissions. (This is a far more effective and serious approach to reducing emissions than adopting a cap-and-trade program which will take too long to attain significant emission reductions and which many corporations will invariably figure out ways to skirt. The negative economic effects of a carbon tax can be offset by reducing or eliminating taxes on corporate profits, labor and other “public goods.”)

While Riverkeeper is not going to shift our focus away from clean water protection to become a climate change group, we feel strongly that all environmental groups must do something to help mobilize Americans into taking action on this urgent issue. For it is quite simply the issue that affects all others. We figure the best way to do that is to make sure our members – among the most informed and active of any environmental group in the country – are equipped with the basics of what climate change is, what you can do about it, and where you can go to learn more.

In this issue of *Riverkeeper*, we present Part One of a two-part series which provides our readers with a basic overview of the issue – what it is, what causes it, and what its worldwide effects might be. We also outline key steps needed to combat it as well as a list of groups and resources you can contact to get more involved. In our fall issue, we will present Part Two which will focus on the best estimates of how climate change will affect New York’s environment and citizens.

As bleak as things seem to be given the specter of a warming planet, the good news is that we know what we need to do to stop it and we have the technology and policy prescriptions to do it. Now all we need is the will to act.

While global climate change is no doubt the issue that will most govern our behavior in the 21st century (if we’re lucky), protecting the availability and cleanliness of our drinking water is probably the second greatest environmental challenge we face worldwide. Riverkeeper will continue to be a model of water protection here in the United States and abroad and will strive harder still to come up with new ways to make sure that access to safe clean drinking water is affirmed as a basic human right.

We are very grateful to our friends at the Natural Resources Defense Council (NRDC) for allowing us to reprint the valuable information below from their website.

— Alex Matthiessen

Excerpted from www.nrdc.org/globalWarming/

What is Global Warming?

Global warming is caused by carbon dioxide and other air pollution that is collecting in the atmosphere like a thickening blanket, trapping the sun’s heat and causing the planet to warm up. Coal-burning power plants are the largest U.S. source of carbon dioxide pollution — they produce 2.5 billion tons every year. Automobiles, the second largest source, create nearly 1.5 billion tons of CO₂ annually.

Although local temperatures fluctuate naturally, over the past 50 years the average global temperature has increased at the fastest rate in recorded history. And experts think the trend is accelerating: the 10 hottest years on record have all occurred since 1990. Scientists say that unless we curb global warming emissions, average U.S. temperatures could be 3 to 9 degrees higher by the end of the century.

How Global Warming Affects Our Lives

Global warming is already causing damage in many parts of the United States. In 2002, Colorado, Arizona and Oregon endured their worst wildfire seasons ever. The same year, drought created severe dust storms in Montana, Colorado and Kansas, and floods caused hundreds of millions of dollars in damage in Texas, Montana and North Dakota. Since the early 1950s, snow accumulation has declined 60 percent and winter seasons have shortened



>> In what scientists regard as an alarming sign of events to come, the area of the Arctic’s perennial polar ice cap is declining at the rate of 9 percent per decade.

in some areas of the Cascade Range in Oregon and Washington.

Of course, the impacts of global warming are not limited to the United States. In 2003, extreme heat waves caused more than 20,000 deaths in Europe and more than 1,500 deaths in India.

(continued on page 12)



>> **Coal-burning plants, like the Danskammer Power Plant in Newburgh, NY, are the largest source of carbon dioxide pollution in the U.S., generating 2.5 billion tons of CO2 each year.**

And in what scientists regard as an alarming sign of events to come, the area of the Arctic's perennial polar ice cap is declining at the rate of 9 percent per decade.

Global warming doesn't create hurricanes, but it does make them stronger and more dangerous. Because the ocean is getting warmer, tropical storms can pick up more energy and become more powerful. So global warming could turn, say, a category 3 storm into a much more dangerous category 4 storm. In fact, scientists have found that the destructive potential of hurricanes has greatly increased along with ocean temperature over the past 35 years.

What Kind of Future Does A Hotter Planet Hold?

Global warming is a complex phenomenon, and its full-scale impacts are hard to predict far in advance. But each year scientists learn more about how global warming is affecting the planet, and many agree that certain consequences are likely to occur if current trends continue. Among these:

- Melting glaciers, early snowmelt and severe droughts will cause more dramatic water shortages in the American West.
- Rising sea levels will lead to coastal flooding on the Eastern seaboard, in Florida, and in other areas, such as the Gulf of Mexico.
- Warmer sea surface tempera-

tures will fuel more intense hurricanes in the southeastern Atlantic and Gulf coasts.

- Forests, farms and cities will face troublesome new pests and more mosquito-borne diseases.
- Disruption of habitats such as coral reefs and alpine meadows could drive many plant and animal species to extinction.

Recently, researchers — and even the U.S. Defense Department — have investigated the possibility of abrupt climate change, in which gradual global warming triggers a sudden shift in the earth's climate, causing parts of the world to dramatically heat up or cool down in the span of a few years.

In February 2004, consultants to the Pentagon released a report laying out the possible impacts of abrupt climate change on national security. In a worst-case scenario, the study concluded, global warming could make large areas of the world uninhabitable and cause massive food and water shortages, sparking widespread migrations and war.

While this prospect remains highly speculative, many of global warming's effects are already being observed — and felt. And the idea that such extreme change is possible underscores the urgent need to start cutting global warming pollution.

Who's Responsible for Global Warming?

The United States is the largest source of global warming. Though Americans make up just 4 percent of the world's population, we produce 25 percent of the carbon dioxide pollution from fossil-fuel burning — by far the largest share of any country. In fact, the United States emits more carbon dioxide than China, India and Japan, combined. Clearly America ought to take a leadership role in solving the problem. And as the world's top developer of new technologies, we are well positioned to do so — we already have the know-how.

Solutions Exist

Technologies exist today to make cars that run cleaner and burn less gas, modernize power plants and generate electricity from nonpolluting sources, and cut our electricity use through energy efficiency. The challenge is to be sure these solutions are put to use.

We can cut global warming

pollution by reducing pollution from vehicles and power plants. Right away, we should put existing technologies for building cleaner cars and more modern electricity generators into widespread use. We can increase our reliance on renewable energy sources such as wind, sun and geothermal. And we can manufacture more efficient appliances and conserve energy.

Cost-effective technologies to reduce global warming pollution from cars and light trucks of all sizes are available now. There is no reason to wait and hope that hydrogen fuel cell vehicles will solve the problem in the future. Hybrid gas-electric engines can cut global warming pollution by one-third or more today; hybrid sedans, SUVs and trucks from several automakers are already on the market.

But automakers should be doing a lot more. They've used a legal loophole to make SUVs far less fuel-efficient than they could be; the popularity of these vehicles has generated a 20 percent increase in transportation-related carbon dioxide pollution since the early 1990s. Closing this loophole and requiring SUVs, minivans and pick-up trucks to be as efficient as cars would cut 120 million tons of carbon dioxide pollution a year by 2010. If automakers used the technology they have right now to raise fuel economy standards for new cars and light trucks to a combined 40 m.p.g., carbon dioxide pollution would eventually drop by more than 650 million tons per year as these vehicles replaced older models.

Why Isn't More Being Done to Stop Global Warming?

While the technologies exist,

the corporate and political will to put them into widespread use does not. Many companies in the automobile and energy industries put pressure on the White House and Congress to halt or delay new laws or regulations — or even to stop enforcing existing rules — that would drive such changes. From requiring catalytic converters to improving gas mileage, car companies have fought even the smallest measure to protect public health and the environment. If progress is to be made, the American people will have to demand it.

The Bush Administration has supported only voluntary reduction programs, but these have failed to stop the growth of emissions. Even leaders of major corporations, including companies such as DuPont, Alcoa and General Electric, agree that it's time for the federal government to create strong laws to cut global warming pollution. Public and political support for solutions has never been stronger. Congress is now considering fresh proposals to cap emissions of carbon dioxide and other heat-trapping pollutants from America's largest sources: power plants, industrial facilities and transportation fuels.

Stricter efficiency requirements for electric appliances will also help reduce pollution. One example is the 30 percent tighter standard now in place for home central air conditioners and heat pumps, a Clinton-era achievement that will prevent the emission of 51 million metric tons of carbon — the equivalent of taking 34 million cars off the road for one year. The new rule survived a Bush administration effort to

weaken it when, in January 2004, a federal court sided with an NRDC-led coalition and reversed the administration's rollback.

What Can We All Do?

First, we must use more efficient appliances and equipment in our homes and offices to reduce our electricity needs. We can also phase out the decades-old, coal-burning power plants that generate most of our electricity and replace them with cleaner plants. And we can increase our use of renewable energy sources such as wind and sun. Some states are moving in this direction: California has required its largest utilities to get 20 percent of their electricity from renewable sources by 2017, and New York has

pledged to compel power companies to provide 25 percent of the state's electricity from renewable sources by 2013.

There are many simple steps you can take right now to cut global warming pollution. Make conserving energy a part of your daily routine. Each time you choose a compact fluorescent light bulb over an incandescent bulb, for example, you'll lower your energy bill and keep nearly 700 pounds of carbon dioxide out of the air over the bulb's lifetime. By opting for a refrigerator with the Energy Star label — indicating it uses at least 15 percent less energy than the federal requirement — over a less energy-efficient model, you can reduce carbon dioxide pollution by nearly a ton in total. ■

If you would like to learn more about global warming and what you can do about it, here are some useful links.

- **Natural Resources Defense Council is an environmental action organization that uses law, science and activism to protect the environment. www.nrdc.org**
- **The Stop Global Warming Virtual March, founded by Laurie David (producer of *An Inconvenient Truth*), is an online non-partisan grassroots movement designed to force the United States to deal with global warming. www.stopglobalwarming.org**
- **An Inconvenient Truth is the website for Al Gore's Academy Award-winning film about global warming and the science behind it. www.climatecrisis.net**
- **The Union of Concerned Scientists is a science-based non-profit organization working for a healthy environment and safer world. Their Climate Choices website specifically addresses climate change in the Northeast and California. <http://www.ucsusa.org> www.climatechoices.org**
- **The U.S. Environmental Protection Agency's Climate Change site offers comprehensive information on climate change and steps you can take to help. <http://www.epa.gov/climatechange/index.html>**
- **The Sierra Club's Global Warming and Clean Energy site offers solutions to global warming. <http://www.toowarm.org>**

PUT THIS FOUR-POINT PLAN INTO ACTION AND WE CAN DRASTICALLY CUT GLOBAL WARMING POLLUTION

We have solutions in hand right now to drastically cut global warming pollution. Act now — put clean, innovative energy technologies to use, and enact policies to encourage their rapid, widespread adoption — and we can stop global warming in its tracks. Instead of nearly doubling U.S. global warming pollution by 2050, we can cut it by more than half using today's technology. And with the proper incentives in place, even more innovative solutions will emerge along the way, leading to even bigger reductions.

This four-point plan is how we get started.

STEP 1: Boost Energy Efficiency.

The cheapest and fastest way to cut global warming pollution is to make things that use electricity — like appliances, industrial equipment and buildings — more energy-efficient. We know this works — most of us have bought an Energy Star appliance or two, and have seen firsthand how much money and energy they can save. But there's still much room for improvement, and we must continue to push for products that waste less energy. Likewise, "green building" design and construction can dramatically reduce the enormous amounts of energy that buildings consume in heating, cooling, lighting and water use.

STEP 2: Better Cars and Smart Growth

Our gasoline-burning cars are the second largest source of U.S. global warming pollution. But Americans will put more than 300 million new cars on the road over the next 20 years — if these cars are the best, most efficient vehicles Detroit can make, we'll take a big step toward solving global warming.

Using hybrid engines and other ready-to-go technologies in today's cars could nearly double the mileage they'd get from a gallon of gas, saving a lot of money at the pump. By 2050, fuel-cell technologies and other advancements could boost efficiency to 54 miles per gallon.

We can curb our appetite for oil even further by adopting "smart growth" principles in our cities and towns, encouraging developers to build compact, walkable communities that allow people to spend less time behind the wheel.

STEP 3: Biofuels and Renewable Energy

Business-friendly, cost-competitive and ready to meet a significant portion of America's energy needs, renewable energy has gone mainstream. Wind power is the fastest growing form of electricity generation in the United States, expanding at an average annual rate of more than 20 percent. Solar energy employs more than 20,000 Americans in high-tech, high-paying jobs. And clean-burning biofuels made from plants show great promise as a replacement for gasoline — ethanol producers already make 4 billion gallons of fuel a year, and new methods for

making ethanol from farm wastes or energy crops could compete with oil on a very large scale in addition to providing extra income for farmers. By 2050, renewable energy and biofuels could meet a significant chunk of our energy needs.

STEP 4: Return Carbon to the Ground

Coal is the most carbon-intense of fossil fuels. Reducing use of coal through energy efficiency and renewable energy technologies will be the cornerstones of the solution to global warming, but the plain truth is that hundreds of new coal-fired power plants will probably be constructed around the world in coming years. Coal generates more than half of the electricity we use today, and it is in plentiful supply in such countries as China, India and the United States.

A critical choice remains. Power plants have a long life span — build the new coal plants with dirty, 19th-century technologies and we lock ourselves into high levels of global warming pollution for decades. We can instead choose a 21st-century alternative: Using existing technologies — each in commercial operation today — we can convert coal into a clean-burning gas and capture and dispose of the carbon dioxide deep underground, dramatically reducing air pollution from this dirtiest of fuels. If the United States doesn't invest in this technology, neither will China, India and other countries with large coal supplies.

The Tipping Point

The time to put global warming solutions into place is now.

We can't wait any longer. Scientists say we need to turn the corner on global warming within 10 years to prevent very dangerous impacts from becoming inevitable. Each year that passes without tackling global warming head-on makes the problem more difficult and expensive to solve.

But at the same time, global warming has finally gotten our attention — Americans are increasingly aware that a warming climate is a real threat to our way of life, and that we have a choice about how bad it will get.

The choice lies here: \$16 trillion dollars will be invested in energy development over the next two decades. Will it be poured into polluting, obsolescent technologies that will bring on the worst of global warming? Or will these investments be shifted into advanced, low-polluting technologies that will create the new energy economy that's needed to shut down global warming?

It's up to all of us to increase the heat on our elected officials: we need the right policies — and we need them now — to ensure that the technologies described here are deployed on the scale and timeframe that is needed to achieve deep reductions in global warming pollution by mid-century.

It Can Be Done!

What We Do and How You Can Help

Founded in 1966 by fishermen and community members to confront polluters for control of the Hudson River, Riverkeeper has investigated and successfully prosecuted more than three hundred environmental lawbreakers and is credited with having led the battle to restore the Hudson River and to save New York City's drinking water supply. Today, the Hudson River is the only major estuary on the Atlantic coast of the United States that still retains spawning stocks of all its native fish species. Riverkeeper has helped to establish globally recognized standards for waterway and watershed protection and serves as model and mentor for the growing Waterkeeper movement that includes more than 156 Keeper programs across the country. Please visit our website at www.riverkeeper.org.

How We Operate

Through citizen complaints and our own investigations, we root out polluters and other threats to the Hudson and New York City watershed. We rely on Pace University Law School's Environmental Litigation Clinic to help bring them to justice. With Robert F. Kennedy, Jr. and Karl S. Coplan at the helm, 10 students work as attorneys each semester bringing lawsuits against polluters. The students receive special permission from New York State to practice and provide Riverkeeper with the equivalent of as much as \$1 million in legal services each year.

Ways to Contribute

By joining Riverkeeper you become part of a community of people fighting to protect the Hudson River from pollution and harmful development. Membership benefits are offered at varying levels. Donors under \$500 receive a Riverkeeper bumper sticker, a subscription to the Riverkeeper semiannual newsletter and invitations to select member events. In addition to the above, Atlantic Sturgeon members (\$500-\$999) receive name recognition in the Riverkeeper newsletter and a DVD copy of *Swim for the River*, a 2006 documentary chronicling the first swim of the entire length of the Hudson River. Hudson River Stewards (\$1,000-\$4,999) receive a Riverkeeper picnic blanket. Hudson River Falcons (\$5,000-\$9,999) receive a copy of *Hudson River Journey, Images from Lake Tear of the Clouds to New York Harbor*, with the introduction written by Alex Matthiessen, Hudson Riverkeeper and President.

When making cash contributions, check to see if your company matches charitable contributions by employees. It could double your gift to Riverkeeper. For more information about contributing to Riverkeeper, please contact Allison Chamberlain in the Development Office at 914-478-4501, ext. 232.

Gifts of Stock

Gifts of appreciated securities are an effective way to help Riverkeeper and realize significant tax advantages at the same time. To find out more about contributing stock, contact Riverkeeper's Director of Development, Karen Tumelty, at 914-478-4501, ext. 238.

Charitable Estate Planning

If you wish to ensure the protection of the Hudson for future generations, consider remembering Riverkeeper in your will. The proper designation is:

"To Riverkeeper, Inc., a not-for-profit, tax exempt organization incorporated by the laws of the state of New York in 1983, having as its address 828 South Broadway, Tarrytown, New York 10591-6602. I hereby give and bequeath _____ to be used for Riverkeeper's general purposes."

For additional information about planned giving opportunities, contact Riverkeeper's Director of Development, Karen Tumelty, at 914-478-4501, ext. 238.

How to Join

To join Riverkeeper, simply fill out the form below and mail it along with your contribution to: Riverkeeper, 828 South Broadway, Tarrytown, NY 10591-6602. Please check the appropriate box and fill in the amount below or log on to our website at www.riverkeeper.org.

- Blue Crabunder \$100
- Striped Bass.....\$100 – 249
- American Shad\$250 – 499
- Atlantic Sturgeon\$500 – 999
- Hudson River Steward\$1,000 – 4,999
- Hudson River Falcon\$5,000 – 9,999

Enclosed is my check or credit card authorization for \$ _____

I would like to charge my contribution on my:

VISA MC AMEX Exp. Date ___/___/___

Card # _____

Name as it appears on card _____

Name _____

Business Name _____

Business Title _____

Address _____

Business Address _____

Telephone _____

Business Telephone _____

e-mail _____

Business e-mail _____

Please sign me up for Riverkeeper's Activist Listserv. I want to be notified by e-mail about public hearings, letter-writing campaigns and other activist events. My e-mail addresses are included below.

Entergy Considers Leak Remediation Amid Concerns Over Strontium-90 in Hudson River Fish



BY PHILLIP MUSEGAAS
August 2006 turned out to be a time of high expectations and disappointing results for Entergy in their continuing struggle to resolve the leaking spent fuel pool crisis at the Indian Point nuclear power plant, located twenty-five miles north of New York City on the Hudson River. On the one hand, Entergy unveiled its plan to begin cleaning up the contaminated groundwater by January 2007, no doubt hoping the remediation would be well underway by the time the battle over the plant's relicensing commenced in March 2007. They promptly encountered delays after Riverkeeper raised

concerns with New York's Department of Environmental Conservation (DEC) regarding whether the company had tested the groundwater for other non-radioactive pollutants, including Polychlorinated Biphenyls (PCBs), before being allowed to dump the water back into the Hudson. Their initial test of a remediation well was also a failure, casting doubt on the feasibility of their remediation plan (See "Entergy's Remediation Woes," facing page). That same week in August, Entergy collected fish samples from the Hudson River to be tested for strontium-90, no doubt hoping the results would show that

Riverkeeper was wrong about the environmental threat posed by the leaks. The sample results, released in mid-January 2007, suggested just the opposite, showing detectable levels of strontium-90 in blue crabs and perch.

Entergy biologists ventured onto the Hudson on August 6, 2006 to collect fish samples as part of their environmental monitoring program. For the first time since the 1980s, these fish would be analyzed for strontium-90 as well as undergo the usual test for tritium and cesium. The Nuclear Regulatory Commission (NRC) had discontinued its requirement that nuclear plants test for strontium-90 in the environment in the 1980s, citing "inconsistent results" and "extremely complex analysis." However, the agency continues to allow liquid discharges of strontium-90 from operating reactors into the environment under their current regulations.

The fish samples were taken in two locations, half near Indian Point and half in a control location near Newburgh, thirty miles north of Indian Point. Sample species included perch, sunfish, blue crabs, striped bass, catfish and American eel. Only the "edible portions" of the fish were analyzed for strontium-90, pursuant to NRC regulations that focus on the health risks of humans ingesting contaminated fish. The NRC persists in this

approach despite the fact that strontium-90 mimics calcium when ingested, thereby concentrating in the bones of fish and the shells of crabs, clams and mussels.

The samples were analyzed on December 15, 2006 by AREVA labs. On January 15, 2006 the *Journal News* reported that four of the samples had detectable levels of strontium-90 in their flesh. According to the Westchester County Department of Health, the mean background level of strontium-90 in fish is about 10 picocuries per kilogram (pc/kg). Three of the samples with detectable strontium-90 were taken at the control location near Newburgh. The amount of strontium-90 ranged from 13.6 pc/kg to 24.5 pc/kg. The highest amount was detected in a perch collected at the control site. A perch taken near Indian Point also reported 18 pc/kg.

Entergy and the NRC responded by assuring the public that the source of the strontium-90 is global fallout from Cold War atomic weapons tests, and does not pose an environmental or public health concern. While it is true that a number of radioactive isotopes, including strontium-90 and cesium-137, were dispersed into the environment during such tests, global levels of radiation from this source have shown a steady decline as the

radioactive isotopes continue to degrade.

Entergy's attempt to blame these recent findings entirely on global fallout is misleading and dangerous, because it suggests that the liquid radioactive discharges from Indian Point over the past thirty years have had no effect on the Hudson River. They are basing this conclusion on a sample of twelve fish from the Hudson, taken twenty years after testing for strontium-90 was discontinued. Clearly the number and frequency of samples need to be increased, split with independent laboratories, and carefully analyzed. The bones of the fish and the shells of crabs and clams should also be tested so that the full extent of environmental uptake is revealed. The concern here goes well beyond short-term fears over whether to eat fish caught in the Hudson. We all need to know whether strontium-90 poses a risk to the health or reproductive capabilities of these Hudson River species. While Indian Point may be only one of several potential sources of the strontium-90 in the Hudson, it is the only one still actively discharging this toxic pollution into the Hudson today. We cannot afford to wait until Entergy gets around to draining the Indian Point 1 (IP1) pool in 2008 and removing the waste.

It has been nearly six months since Entergy unveiled its remediation plan and began collecting fish samples and nearly eighteen months since the leaks were discovered. Despite all this time and millions of dollars spent on digging wells, conducting hydrological surveys and going on fishing expeditions, neither Entergy nor the NRC seem any closer to resolving this problem. On the contrary, each new season brings new information that confuses rather than clarifies the picture of what is really going on at Indian Point. One thing is known: there is a history of poor maintenance and shoddy management, compounded by weak oversight from the NRC that began under Con Ed's ownership and continues under Entergy's. Toxic pollution is leaching into the Hudson River ecosystem, potentially causing long-term environmental degradation that has yet to be fully assessed. And all this as Entergy applies for a twenty-year license renewal from the NRC. Why continue to live with this risk and this environmental degradation? Riverkeeper has a plan to prevent relicensing and build a safe energy future for the Hudson Valley. To see how you can help, please visit our website at www.riverkeeper.org. ■

ENTERGY'S REMEDIATION WOES

On August 2, Entergy informed the Nuclear Regulatory Commission (NRC) of its plan to test a groundwater remediation well, RW-1, installed next to the Indian Point 2 (IP2) spent fuel pool in the area showing the highest levels of tritium contamination. The plan was to draw out the tritium-contaminated water from under IP2, dilute it and discharge it back into the Hudson, without drawing the more toxic strontium-90 and cesium-137 from the IP1 leak over to IP2. The test was a failure in this regard, based on groundwater samples taken from the RW-1 well in November that showed extremely high levels of cesium-137 for the first time. NRC officials recently confirmed to Riverkeeper that the pump test probably drew the cesium from the IP1 leak plume, causing the contamination to spread into new areas under IP2. They also believe the cross-contamination is temporary, although another pump test will now have to be conducted at a lower flow rate to confirm this. It is unclear what Entergy will propose as a solution if they cannot find a way to avoid increasing the spread of the groundwater contamination.

Entergy was also unclear about how the company would address the possibility that other nonradioactive pollutants might be present in the groundwater, and could be inadvertently discharged into the Hudson if their presence was unknown. In particular, Polychlorinated Biphenyls (PCBs) are known to be present in the IP1 reactor and spent fuel pools. Low levels of PCBs were recently discovered in an abandoned underground sump drain for IP1 as well, raising concerns that they had bypassed the treatment system and were leaking into the environment. Presently there have been no groundwater samples showing the presence of PCBs. New wells dug along the riverfront will be sampled in the next few months in addition to existing wells around IP1. The discharge of any PCBs is specifically prohibited under Indian Point's State Pollution Discharge Elimination System permit (SPDES).

Department of Environmental Conservation (DEC) officials have informed Riverkeeper that any discharge of groundwater through the plant's state-permitted outfall on the Hudson must comply with the SPDES permit before being allowed to proceed. DEC has instructed Entergy to conduct a full range of sampling for non-radioactive pollutants, so that any found, including PCBs, are removed from the groundwater before it's discharged. Riverkeeper will closely monitor both the remediation and the PCB testing to ensure that no additional pollution is added to the Hudson from this plant. ■

Debunking the Myth – Indian Point's Nuclear Power Fails the “Green” Test

BY RENEE CHO

With the world's attention focused on global warming, nuclear energy enthusiasts and even some environmentalists are pronouncing that nuclear energy is the silver bullet. But nuclear energy only accounts for 2.5 percent of the world's electricity needs and cannot replace the energy needs of our transportation sector which produces 25 percent of U.S. carbon dioxide emissions, the main greenhouse gas responsible for global warming.

Indian Point's website boasts that “nuclear is a clean energy source.” While it's true that, unlike other types of power plants, nuclear reactors do not emit carbon dioxide (CO₂), the life cycle of generating nuclear power – from mining to refining to transportation to

storage – requires an enormous amount of energy. So just how clean and green is Indian Point?

Life Cycle Analysis

To answer this question, it's necessary to compare emissions from nuclear energy to those of other energy sources and to take into consideration all aspects of what each one needs to produce energy. Most of the energy necessary for building and operating nuclear power plants—from mining, refining and enriching uranium fuel, conditioning radioactive waste so that it can be stored, to safely transporting and sequestering the radioactive waste, and to finally decommissioning and dismantling the plant – comes from CO₂-producing fossil fuel-burning plants. Coal burning plants produce over 2.5 billion tons

of CO₂ per year in the U.S. alone.

The Nuclear Energy Institute, a policy organization for the nuclear industry, cites several life cycle analyses on its website that claim emissions from nuclear energy are among the lowest of any type of energy production. But the German Oko Institute's ten-year life cycle analysis found that nuclear power produces significantly more CO₂ than renewables (hydro, wind or solar) and wood- or gas-cogeneration systems (where heat produced by electricity production is utilized instead of wasted). Moreover, cogeneration systems and renewables are three to four times cheaper than nuclear energy.

The World Information Service on Energy (WISE) and Nuclear Information and Resource Service (NIRS) predict an impending shortage of uranium from rich ore (where the percentage of uranium in the ore is 1 percent or higher), especially if nuclear energy production is expanded. The majority of glob-

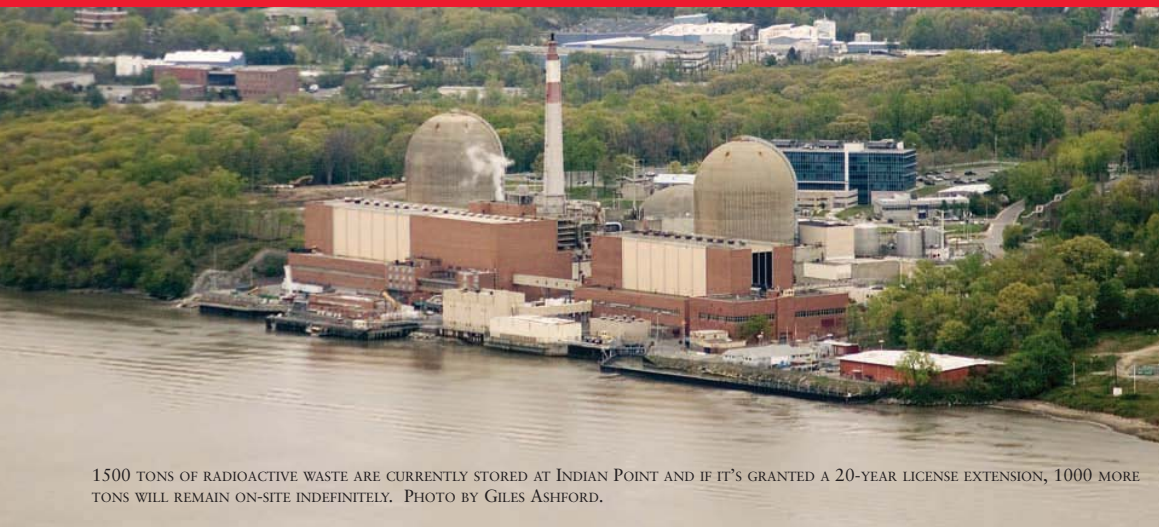
al uranium reserves exist in poorer ores which will require more fossil fuel-produced energy to mine and process.

A recent life cycle study conducted by scientists Jan Willem Storm van Leeuwen and Philip Smith determined that nuclear energy produces 30 percent of the total CO₂ emission of a gas-burning plant, but only when the uranium has been extracted from rich soft ores. When poorer ores are used, nuclear energy produces proportionately more CO₂, and if lean ores are used with .01 percent or less of uranium, actually emits more CO₂ than if the same amount of electricity had been produced by burning fossil fuels directly. In other words, a dramatic increase of new nuclear power plants here and abroad and the subsequent need to mine deeper for uranium could, in fact, increase CO₂ emissions due to the finite uranium resources available.

Moreover, since safely and permanently storing radioactive waste has not yet been accomplished, these life cycle studies have probably underestimated the amount of fossil fuel-generated energy this complex process will require. They have also neglected to factor in the amount of energy that would be needed to transport nuclear waste from all over to a permanent repository.

How Clean Are Other Aspects of Nuclear Energy?

Uranium mining techniques are similar to those used for coal mining which rip open moun-



1500 TONS OF RADIOACTIVE WASTE ARE CURRENTLY STORED AT INDIAN POINT AND IF IT'S GRANTED A 20-YEAR LICENSE EXTENSION, 1000 MORE TONS WILL REMAIN ON-SITE INDEFINITELY. PHOTO BY GILES ASHFORD.

tains and leave behind scarred and polluted landscapes. They also contaminate the land and water with hazardous radioactive uranium tailings. Most uranium reserves in the United States are located on Native American lands where uranium mining has caused environmental and public health problems for decades.

Nuclear plants run on enriched uranium. The enrichment process is fueled by fossil fuel plants which create CO₂ and air pollution. A January 2007 report commissioned by Greenpeace International and the European Renewable Energy Council (EREC) states that 80 percent of the total volume of uranium from the enrichment process ends up as radioactive tailings.

According to the Union of Concerned Scientists, every unit of electricity produced using nuclear power also creates about two units of waste heat which are usually released into water and can alter the balance of the water body's ecosystem. Each day, Indian Point withdraws 2.5 billion gallons of water from the Hudson (nearly twice the amount of drinking water consumed daily by all of New York City) and releases it back into the river at up to 110° F – a 34 degree increase of the River's normal temperature. (See "Feeling the Heat," on page 23.)

The Union of Concerned Scientists projects that by 2015, American nuclear reactors will have produced

75,000 metric tons of radioactive waste that will remain deadly for hundreds of thousands of years. The enormous problem of what to do with this waste still has not been solved. A permanent storage site is planned at Yucca Mountain in Nevada where the waste will be buried deep underground and theoretically remain undisturbed by earthquakes or underground water for eons. But the Environmental Protection Agency has already acknowledged that radioactivity will leak and is planning an 11-mile "controlled area" buffer around the burial site. The controversial Yucca Mountain plan has met with delays and legal challenges and though scheduled to open in 2017, many experts believe that political, social, and environmental obstacles will prevent the site from ever opening.

In the meantime, highly radioactive waste is being stored on-site in spent fuel pools at each nuclear plant. 1500 tons of waste are currently stored at Indian Point; and should the plant receive a twenty-year license extension, an additional 1000 tons would be generated and remain on-site at Indian Point indefinitely.

In August 2005, it was discovered that Indian Point 2's (IP2) spent fuel pool was leaking tritium into the groundwater and Hudson River; and by spring of 2006, Entergy, Indian Point's owner, admitted that Indian Point 1's (IP1) reactor was leaking strontium-90 into the river as well. Entergy still

has not discovered the source of the IP2 leak or been able to stem the IP1 leak, and recently strontium-90 was discovered in Hudson River fish.

Though on-site storage of radioactive waste was never meant to be permanent, Indian Point is currently building a dry cask storage system to store spent fuel rods above ground on concrete pads that is designed to contain the waste for up to 100 years.

Our Energy Future

A new nuclear plant has not been licensed in the US since 1978, after the Three Mile Island accident. And without government assistance (from 1974-2005, the federal government spent almost \$145 billion on nuclear research and development), the nuclear industry has never been economically competitive with coal and natural gas. However in 2002, the Energy Department launched its "Nuclear Power 2010 Program" which will use government (i.e. taxpayer) and industry money to subsidize the development of new nuclear power plants which some hope will blossom into a "Nuclear Renaissance."

Even if we ignore the many aspects of nuclear production that are neither clean nor green including its intractable radioactive waste problem, nuclear energy is not a sustainable energy source. The Greenpeace/ EREC report states, "In the light of various scenarios for the worldwide development of nuclear power, it is likely that

uranium supplies will be exhausted sometime between 2026 and 2070." Moreover, the danger in advancing nuclear energy as the solution to global warming is that the nuclear industry will be over-subsidized while more promising sources of renewable energy are under-funded, and underdeveloped.

There are currently 442 nuclear reactors worldwide. John Holdren, director of the Woods Hole Research Center and president of the American Association for the Advancement of Science, suggested that we would need another 3,000 plants for nuclear power to provide one-third of the world's expected energy needs by 2100. If we build more nuclear power plants and grant license extensions to aging plants like Indian Point, we will also increase the potential for accidents, acts of terrorism, and the spread of nuclear weapons.

The bottom line is that Indian Point's nuclear power is neither clean nor green, and the process needed to create fuel from uranium for its reactors is energy-intensive and creates greenhouse gases such as carbon dioxide. It would be far wiser for New York State to start investing in truly clean and green energy production such as wind, solar, and biofuels, while offering incentives to encourage Smart Energy use by consumers which would drastically reduce our contributions to global warming. ■

program

THE HUMAN COST OF GE'S PCBs

BY RENEE CHO

Fort Edward, New York, a gray industrial town on the upper Hudson River, was once known for its role in the French and Indian War and the American Revolution. Today it is ground zero for one of the biggest environmental debacles since Love Canal: 60 years of dumping of Polychlorinated Biphenyls (PCBs) into the Hudson River by the General Electric Company (GE). PCBs, organic pollutants listed by the United States Environmental Protection Agency (EPA) as probable human carcinogens that have been linked to nervous, reproductive, endocrine, and immune system damage, persist in the environment – and the human body—indefinitely.

The Persistence of PCBs

From 1947 through 1975, GE used PCBs as insulating agents in the manufacture of electrical equipment. During that period, GE dumped the vast majority of 1.3 million pounds of it into

the Hudson River, but the New York State Attorney General's office attests that **GE did not have any permit to discharge PCBs into the Hudson River until 1975. By then, the majority of the dumping had already occurred.**

PCBs made their way up the food chain and destroyed the Hudson's once thriving fishing industry. In 1984, the 200-mile stretch of the PCB-contaminated Hudson below the GE plants at Fort Edward and nearby Hudson Falls became the EPA's largest Superfund site. Despite over \$100 million dollars spent to avoid responsibility for its destruction of the Hudson, GE is being forced to begin dredging the toxic sediment in 2009. **The cost to the people of Fort Edward and Hudson Falls of GE's toxic legacy and unconscionable delay is incalculable.**

Dick and Tammy Williams hosted staff from Riverkeeper's Hudson River Program in November 2006 when we were

invited to learn from Fort Edward residents how PCBs and other contaminants dumped by GE have affected their lives. GE's toxic legacy includes poisons that have contaminated the earth under their homes, their drinking water, their air, their health, and their prospects for the future.

The Williams Family

Dick Williams, age 71, has lived in Fort Edward all his life. As a child, his wife Tammy, 42, swam, fished and bull-frogged in the Hudson. Back then, the public wasn't aware that GE had been dumping PCBs into the river for a generation. Today, Dick and Tammy are trying to sell their once successful dairy farm on Stevens Lane because it is sitting on land contaminated by PCBs.

It wasn't until the early 1980s that the general population began to understand the danger of PCBs. Seven families in Fort Edward, mostly on Stevens Lane, sued GE for contamination of their homes, their water and air, and for health effects. In 1989, GE agreed to settle with these families, offering them a compensation package and forbidding them from ever disclosing its terms. In exchange, GE was granted a permanent "pollution easement" tied to each of the seven properties preventing the owners and any future owners from ever suing GE for property damage based on contamination that occurred prior to the easement's date.



ABOVE: DICK AND TAMMY WILLIAMS. BELOW: DESPITE SPENDING \$100 MILLION DOLLARS TO DELAY THE CLEANUP OF THE HUDSON RIVER, GE IS BEING FORCED TO BEGIN DREDGING THE TOXIC SEDIMENT IN 2009.

The "pollution easement" on the Williams's property has made the farm virtually impossible to sell. Tammy sighed, "We'll probably have it forever."

A Toxic Brew

In addition to PCBs, the plants used toxic cleaning solvents such as Trichloroethylene (TCE, a probable carcinogen), benzene (a known carcinogen), kerosene, and gasoline to wash down work areas. Over decades of use, this noxious chemical cocktail leached into the ground beneath both the Fort Edward and Hudson Falls GE plants.

In 2000, the New York State Department of Environmental Conservation (DEC) issued its Record of Decision (ROD) which established how a land-



THE HUDSON FALLS PLANT AT BAKERS FALLS, JUST UPRIVER FROM FORT EDWARD.

PHOTOS COURTESY OF SABRINA WELLS

based cleanup at the Fort Edward plant and its discharge pipe into the Hudson River would proceed. It estimated that 144,000 gallons of PCBs and other toxins had collected under the parking lot of the plant, and created a toxic plume over 500 feet wide. GE began pumping toxins from wells near the parking lot in 2003. Despite three years of active remediation, Kevin Farrar, a DEC engineering geologist, noted that, as of November 2006, 131,444 gallons of PCBs still remained underground.

Just opposite GE's parking lot, Tammy Stewart's house sports the sign, "GE Would U Live Here?" The 45-year-old Stewart confessed that when she moved there with her three children in 2000, she hadn't given much thought to PCBs or other toxins. But in February 2005, she received notice of testing for TCE contamination in her area. "Living right across from GE, the hair stood up on the back of my neck," she recalled. The soil on Stewart's property was found to be contaminated with PCBs, but levels were within the "acceptable range." Stewart said, "We didn't go into our backyard for almost a year."

It was then that Stewart discovered that her house had belonged to one of the seven families who settled with GE in 1989, and that it carried a permanent "pollution easement." An archaic system of recording easements in Fort Edward had

hidden this from her. Stewart was told that the easement prevents her from ever being able to sue GE. "I'm stuck, because I could never sell the house to another family and have them go through what we did," she said.

"I Don't Like the Smell of It"

The 350 families living in Fort Edward's northern township used to drink water from their own wells, but in December 1982, the New York State Department of Health (DOH) discovered that their aquifer was heavily contaminated. The town financed a \$1 million 21-year bond, creating a new water district and assessing the 350 families in order to pay for it. These families, who had once enjoyed free water, were assessed an additional \$1 million in interest on the bond plus regular water bills.

The Village of Fort Edward, a separate municipality, used to draw its water from the town of Moreau on the west side of the Hudson. But in the early 1980s, a groundwater plume of toxins 4,800 feet long and 2,000 feet wide (the equivalent of 167 football fields) was discovered flowing through that water supply from an old dump where GE had disposed of toxic waste. GE contained and sealed the site, established treatment systems and installed an air stripper (like a giant sprinkler) to expel TCE vapors from Reardon Brook which fed into the Village's public water supply. The equipment



TAMMY STEWART'S HOUSE FACES THE FORT EDWARD GE PLANT PARKING LOT.

treats approximately 215 million gallons of contaminated water yearly, and in 1989, it was estimated that the cleanup would take 200 years or more to complete. Ray Lacque, the water superintendent for the Village of Fort Edward for 27 years, explained that the air stripper is maintained constantly, but has not been updated. "We monitor the water going into and coming out of the air stripper for TCE every month," he said. In 1994, however, EPA waived its own cleanup standards for treatment of this groundwater plume because they claimed they were impossible to attain. As a result, in the last Five-Year Review of the Moreau cleanup in 2003, the EPA declared that "The groundwater contamination at the GE Moreau site is under control." Richard Fuller, a resident since 1984, said, "The water's supposed to be okay, but I don't like the smell of it."

There are likely other areas where the drinking water is also contaminated. Robert LeFebvre was a superintendent at the Defiance Asphalt plant in Fort Edward from 1960 to

1970. According to a sworn statement he made in 2001 before he died of multiple cancers, GE contracted with Defiance to haul away its PCB/waste oil mixture for over ten years. The toxic waste was brought to Defiance, combined with heavier oil, then sprayed on dirt roads in Warren, Washington and Saratoga Counties to keep dust from flying. Eventually the roads were paved over, but in his statement LeFebvre said, "PCB contamination is more widespread than the public realizes; and no doubt it affects both the water table and our homes and yards."

The Vapors They Breathe

In December of 2005, GE engineers discovered TCE vapors emanating from the ground water and soil and penetrating buildings in Fort Edward. Monitors determined that the vapors were coming from a traveling plume of contaminants moving south and west of the GE plant. GE arranged with some owners of the TCE-contaminated homes to install Sub-Slab Depressurization

program

Systems (SSDS) which seal the foundation, then suck the dangerous vapors up and out of the house. But of the 125-140 homes that are eligible for the SSDS, only about a third have installed them.

Tammy Stewart explained, “Some people refused to have their homes tested because they just don’t want to know. Others don’t want to get the SSDS because they think they then won’t be able to sell their homes.” A number of residents expressed doubts because there is no government oversight of the SSDS program run by a GE subcontractor. They want the DOH to take over administration of the program to ensure that the SSDS are properly fitted for each home and correctly installed and maintained.

Many Cancers – Few Studies

Lieutenant Colonel Dennis Prevost, age 57, a retired Army officer and vice president of the community group Hudson River C.A.R.E., moved to Putnam Avenue in Fort Edward in 1956. He described an alarming number of health anomalies among the 27 families that lived on the street: his brother died of brain cancer at age 46, his college roommate died of brain cancer, a young woman in her 20’s died of brain cancer, and the woman next door now suffers from pituitary cancer.

Between 2000 and 2004, a cancer cluster study was commissioned by the DOH for the towns of Fort Edward and Hudson Falls. While certain areas showed elevated levels of

cancer occurrence, the results were deemed inconclusive. Prevost believes the results were diluted because the study covered such a large area, parts of which had no contamination. Nevertheless, the DOH’s Cancer Registry does show colorectal cancer rates for Fort Edward and Hudson Falls 15 to 49 percent higher than expected, and lung and bronchus cancer statistics 50 to 100 percent above normal.

The anecdotal evidence is also difficult to ignore. Jo Anne Fuller, an amateur historian who moved to Fort Edward in 1980, noted, “Recently, so many friends and neighbors ages 35 to 50—people who grew up in Fort Edward and swam in the river—have been hit with breast and testicular cancer and leukemia.” In 1984, when Fuller’s 17-year-old daughter was on the Fort Edward/Hudson Falls track team, five girls on the team were diagnosed with leukemia during the academic year.

The Hudson Falls Central School District of approximately 2300 students ranks highest in Washington County for learning disabilities, emotional disturbances, autism, and mental retardation, according to The New York State Education Department’s Special Education statistics for 2003-2005. These figures echo research done by Dr. David Carpenter, Director of the Institute for Health and the Environment at the University at Albany, whose 20-year study of Mohawk Indian adolescents along the St. Lawrence River

shows a clear correlation between PCB exposure and poor memory, thyroid function and lower IQ.

Carpenter has also studied hospitalization rates for various diseases in Hudson River communities that have PCB waste sites. He concluded, “Individuals in communities along the Hudson, including the people of Fort Edward and Hudson Falls, are more frequently hospitalized for heart disease, stroke, high blood pressure, bronchitis, acute respiratory infections, and diabetes than are people both from communities without waste sites, and from communities that have hazardous waste sites without PCBs.” Prevost himself suffered a stroke in 2004.

The DOH is currently conducting yet another health study on PCBs in Fort Edward and Hudson Falls, but no epidemiological study has ever been done on the children of Fort Edward and Hudson Falls.

More Contamination Remains

There are many “orphan” land-based contaminated sites around Fort Edward and Hudson Falls which have not been officially recognized. These include three landfills, the old Defiance Asphalt plant, sites where contaminated sediment from the dredging of the Champlain Canal was deposited, and areas where PCB dust abatement was used. GE has all but ignored these “orphan” sites, and the DEC seemingly has neither the money nor the legal power to force the issue. ■

WHAT NEEDS TO BE DONE

Riverkeeper has been involved with the battle to force GE to clean up the PCBs in the Hudson since 1970 when PCBs were first discovered in Hudson River fish. Today, Riverkeeper is pressing the federal government, i.e., the EPA, to designate Fort Edward and Hudson Falls as stand-alone Superfund Sites on its National Priority List. Although the Hudson River dredging cleanup is a federal Superfund site, the land-based sites have been overseen only by the understaffed and under-funded Pataki DEC. The benefits of federal oversight would be considerable: epidemiological studies, remediation of water and soil gas plumes, examination of devalued property and tax burdens, federal funding for the cleanup and coordination with the upcoming dredging, and ultimately, a full reckoning of GE’s toxic legacy. Riverkeeper is also offering the residents support in their efforts to obtain grants for community revitalization and legal advice on ways to redress damages.

The people of Fort Edward and Hudson Falls have already suffered grave environmental injustice, and because their situation has never received the kind of all-encompassing attention it deserves, the full extent of damage to these two communities remains unknown.

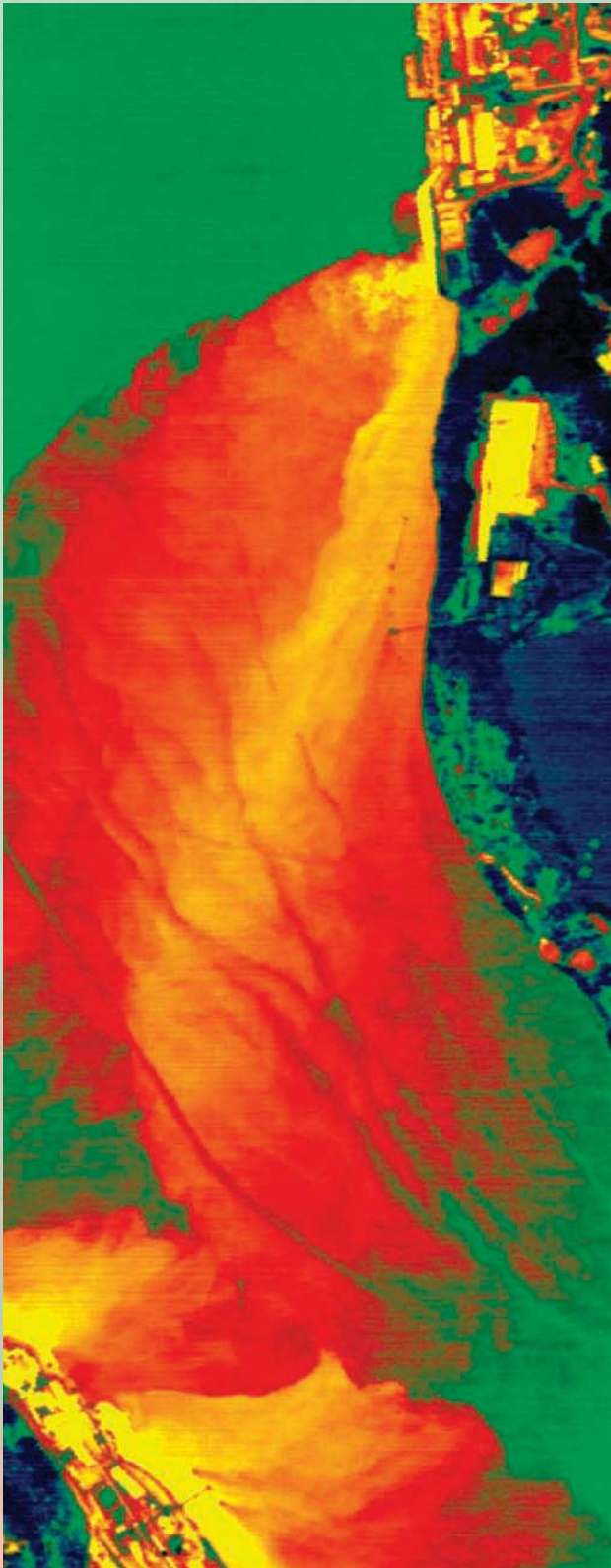


IMAGE WAS ACQUIRED WITH A MULTISPECTRAL SENSOR AND THE IMAGE IS FROM THE THERMAL CHANNEL DATA, SHOWING THERMAL PLUMES FROM INDIAN POINT AND LOVETT. IMAGE COURTESY OF SPECTRA VISTA CORPORATION

FEELING THE HEAT:

Thermal Pollution from Hudson River Power Plants May Exacerbate Climate Change

BY VICTOR TAFUR

The first law of thermodynamics, the law of conservation of energy, states: Energy can be neither created nor destroyed, only converted from one form to another. This law of nature explains the image to the left, which appeared on the cover of Riverkeepers's Fall 2003 Newsletter, and is vitally important today to understand the effect of power generated along the Hudson in this era of climate change concern.

This image illustrates heat pollution from power plants into the Hudson River. It is a multispectral thermal infrared image of hot water plumes in the Hudson River, showing the plumes of heated effluent from Entergy's Indian Point and Mirant's Lovett facilities in New York. Green shows the river's baseline temperature. Red shows an increase of 1 to 7 degrees Fahrenheit (°F). The image was acquired at slack tide (when there is no tidal current).

The explanation for this phenomenon is quite simple. These old facilities produce electricity by creating steam and running it through turbine generators. These fossil fuel or nuclear-powered steam-electric plants are inefficient in the sense that not all the energy in the fuel is converted to electricity, but a large portion—which can be as high as two-thirds of the total energy—is released back to the environment in the form of waste heat, air emissions (i.e., carbon dioxide when burning fossil fuels), and nuclear waste. In the case of nuclear power reactors (which do not require the burning of fossil fuel), a reaction is produced at about one million ° F. There is an obvious overkill here: boiling water requires only 212° F.


But the image to the left reveals more important facts in today's climate change era. If you look closely, the image shows the cumulative effect of these thermal plumes (Entergy's Indian Point in the top right and Mirant's Lovett in the lower left) on one of the Hudson River's designated Significant Coastal Fish and Wildlife Habitats: Haverstraw Bay, which serves as the "nursery" of the Hudson's striped bass, American shad, white perch, tomcod, Atlantic sturgeon and many other species of fish and crabs. Shortnose sturgeon (endangered) usually winter in this area as well. And what is more alarming, the impact remains unabated.

The thermal problem on the lower Hudson may be old news to some; however, recent scientific studies have revealed that Hudson River water temperature records provide evidence of a general warming trend across the more than 50-year period of available data. The study concluded that "the duration of the spring and early summer period of peak fish spawning activity (55° – 70° F) appeared to shorten over [the] period of available data suggesting a more rapid temperature rise during this period. In addition, this peak productivity period appears to be occurring slightly earlier in recent years."¹

What are the environmental authorities of the State and the owners of the facilities doing about it? The answer is simple, but unacceptable: absolutely nothing has been done in the last 25 years. In the early 1980s, the facilities were granted permits allowing them to release heat pollution under certain limitations (i.e., a maximum discharge temperature of 102° F for Indian Point) and subsequent permits (the most recent permit for Indian Point was issued in 1987!) did not impose any new limitations, but simply continued the original restrictions. In 2003, the environmental impact statement prepared by the New York State Department of Environmental Conservation (DEC) on these facilities noted that thermal analyses need to be updated to reflect recent, more extreme conditions, but it stopped short of recommending specific changes in the permits.

It remains to be seen whether the DEC will step up and impose adequate thermal limitations for cooling systems and/or technological upgrades so that power plants expel less heat into the River. Since its creation, Riverkeeper has been advocating for adequate safeguards to protect the Hudson River ecosystem from thermal pollution. We believe the time has come to significantly reduce the thermal pollution from Hudson River power plants. This unique ecosystem simply cannot tolerate the heat anymore!

¹ See *Pattern In Water Temperature and Freshwater Flow to the Estuary over the Past 50 Years*, by William Dey and John Young, ASA Analysis and Communications, Inc., Abstract, at 3, in Peteet, Dorothy (Ed.) (2006). *Changing Climate and its Consequences in the Hudson River Valley: Past, Present, and Future*, Proceedings, Altamont, NY: Hudson River Environmental Society (at NASA, Goddard Institute for Space Studies, November 2nd, 2006).



BASIL SEGGOS, RIVERKEEPER'S CHIEF INVESTIGATOR,
GOT A NEW PERSPECTIVE ON POLLUTERS FROM ABOVE.

PHOTO BY GILES ASHFORD

Tracking Polluters from the Air

BY GREG CLARY, *JOURNAL NEWS STAFF*
SEPTEMBER 1, 2006

Everybody knows the old saw about not seeing the forest for the trees, but how often do we really get to fly high enough to even see the forest? About once a year, if you're from Riverkeeper and you're looking for polluters along the Hudson River. Most of the time, these environmental advocates are traveling the inlets and the riverbank by boat and by foot, looking for pipes pumping pollution. Or they're patrolling the halls of government trying to keep up with lobbyists adept at protecting the rights of industry to make a profit.

This week, however, Earth Watch got to ride along in a helicopter that carried the organization's investigators and a photographer above the Hudson all the way from the Statue of Liberty to Albany.

"We're finding oil slicks, cement plant discharge, stuff you just can't see from the water," said Basil Seggos, 32, Riverkeeper's chief investigator for the past five years. "We did this in May of 2005, and this trip is better because you can see right to the ground."

The flight isn't an insignificant proposition. The \$5 million helicopter that former New York Police Department pilot James McVey handles effortlessly costs about \$2,600 a hour to rent. This year's trip was sponsored by an anonymous donor who

believes strongly enough in the aerial mission to tell Riverkeeper to take the time they need and just send him the bill.

The trip starts in Teterboro Airport a little after 7 a.m., just as the sun is breasting the horizon. Within minutes, we're flying over Newtown Creek in Brooklyn, a spit of a river that moves too slowly and is home to too much industry to even flush itself effectively.

"That greenish, yellowish stuff you see is sewage," Seggos points out. "It's going into Maspeth Creek." His compatriot, Riverkeeper boat captain John Lipscomb, notes that swimming in the water we're flying over would "get you very ill," and the sheen from oil sitting on the river's surface looks like nothing anyone would want to dive into. With photographer Giles Ashford snapping photos almost as fast as his trigger finger will work, crew members look for angles and sites that will help them take on polluters.

"We're seeing stuff now we haven't seen in terms of pollution sources," Seggos said. "That's the smoking gun we need to prosecute these cases."

After a stop back at Teterboro for more fuel, we head up the Hudson toward Poughkeepsie, moving between Rockland and Westchester to check the color and health of the vegetation, as well as to look for contaminants. The area north of the city looks almost pristine compared to the first leg of the trip, but a line of trash that has washed up from the river into the Rockland shore marshes stretches out like a squiggly metallic line drawn with a blunt pen.

The Tappan Zee Bridge runs under us like a large Lego project, and shores of Westchester and Putnam go by quickly, as trained eyes see nothing more harmful than the growing ranks of condominiums along the waterfront.

"In the four years since we first came up here (by air), you can see the changes," says Lipscomb, who tells detailed stories about what seems like every boat and section of shoreline we fly over. "You see housing you didn't see then. Five years from now, you'll see even more."



EFFLUENT FROM THE HUGE ROCK QUARRY AT CLINTON POINT DISCHARGES INTO THE HUDSON RIVER.

The air exploration isn't just a field trip for lawyer types who spend a good deal of their time filing legal briefs and lawsuits. Seggos says one of the trips yielded enough evidence to bring down a \$500,000 fine against a cement maker. Seggos routinely uses the federal Clean Water Act as the basis for going after polluters, and clear images from the helicopter, with time and date stamps, work as effective weapons to get companies to stop polluting or to get prosecutors interested. Probably the best "catch" of the day – if you don't count looking down on an eagle near its Rattlesnake Island nest – is a pool of greenish yellow ooze downhill from a capped landfill near Catskill, N.Y.

"That is Martian," Seggos says of the plume. "I've never seen that at a landfill before." Another plume spreads into the river from a nearby cement plant, leaving what Seggos calls a ravine "choked with chocolate milk" and acres of dead trees. As we hover for a few minutes, Ashford snaps photos of the flowing wastewater and a truck wash nearby that is a major source of the brownish release.

Down below, workers point at us in growing numbers the longer we hover, until we head upriver. Within days, that sighting will turn into a promise in writing to sue St. Lawrence Cement, alleging the operation isn't complying with federal release permits. In some cases, notification is enough to get companies to alter their procedures. That's fine with Riverkeeper, though a protracted legal battle doesn't scare them off either.

"We don't want to put these guys out of business," Seggos said. Lipscomb chimes in without letting his partner get his breath. "We just want them to operate their business without hurting the environment."

Earth Watch runs every Friday. Send your ideas or comments to Greg Clary at gclary@lohud.com or 914-696-8566.

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ONE OF THE DIRTIEST WATERWAYS IN NORTH AMERICA, NEWTOWN CREEK IS IN THE HEART OF NEW YORK CITY.

THE TAPPAN ZEE BRIDGE: TO BUILD OR NOT TO BUILD

BY SABRINA WELLS

ON AN UNUSUALLY WARM DECEMBER MORNING, a group of local politicians and land use planners from Westchester and Rockland boarded the Riverkeeper patrol boat for a trip to the Tappan Zee Bridge. Viewing the span from the water was a new perspective for most of our guests who were concerned about the future of the bridge, the current array of proposals, and the impacts these proposals would have on the region. Boat captain John Lipscomb has been ferrying people out to see the bridge since last spring to help inform and educate local decision makers and the citizens who elect them. The concern on both the Rockland and Westchester sides of the river is not merely about the morning commute but rather what these counties will look like in the future if a replacement bridge is built.

There have been a lot of headlines about the proposals: several of the newly elected officials in Rockland ran on a “no new bridge platform.” Rumors that the bridge only had a 50-year life span and that shipworms were eating away at its pylons were debunked. The County Executives have reached out to newly elected Governor Eliot Spitzer to step in, stating that the project “has been poorly handled” and “not in the best interests of the State nor our residents.”

THE CONCERN ON BOTH THE ROCKLAND AND WESTCHESTER SIDES OF THE RIVER IS NOT MERELY ABOUT THE MORNING COMMUTE BUT RATHER WHAT THESE COUNTIES WILL LOOK LIKE IN THE FUTURE IF A REPLACEMENT BRIDGE IS BUILT.

Riverkeeper came out last year in favor of a rehabilitated bridge with improvements including breakdown lanes on the approach causeways, a bus rapid transit system with a dedicated lane, and a bike path – all of which are feasible as determined by earlier engineering studies.

While many residents and local leaders have come forth to state their preference for Riverkeeper’s vision of the bridge, it is apparent in the public forums that the powers that be would prefer to focus only on a new bridge. In doing this they have all but ignored the option to rehabilitate the existing bridge. They have also ignored serious local impacts. Concerns about this bias have led some municipalities to initiate their own impact studies so that local and regional concerns are not lost in the mad shuffle to build, build, build.

The \$12.5 to \$14.5 billion for a new bridge will fulfill the adage “if you build it they will come.” If the proposed large capacity bridge is built, it is just a matter of time before car commuters and traffic fill its capacity and require endless renovation of I-287 to continue forever.

Sprawl is such a problem in Rockland that planners are looking to use the brackish Hudson River to supply its drinking water! While the mass transit options proposed for a new bridge are laudable, they are ill-conceived and will not get commuters out of their cars. The bus rapid transit system that is possible on the existing bridge is the only feasible way to get commuters their one-seat ride to Westchester business parks and shopping areas. Rail cannot do this. Speaking of one-seat rides, commuters from Orange and Rockland will be afforded that necessity with the construction of the Hudson River tunnel, already funded and in the planning stage.

On that December morning, as we discussed the possible impacts a new bridge would pose, we also focused on how important the body of water we were floating on is to the Department of Conservation (DEC) fisheries, how it is “the most productive area of the

river” and “has the greatest diversity” (DEC 2007). The Tappan Zee supports a significant population of blue crabs, sees striped bass year-round and in significant numbers in mid- to late summer, and is a nursery for summer and winter flounder species. There are huge numbers of bay anchovies which are one of the largest food sources for larger fish in the lower estuary. The Tappan Zee is also the wintering ground for young short nose sturgeon, an endangered species. The health of the Tappan Zee is vital to the overall health of the Hudson River ecosystem and its fish population.

As we turned the boat around and headed back to shore, we took one final glance at the area and pictured what 10 years of heavy construction equipment in the water would do to the river and its communities. ■



PATROL BOAT LOG

BY JOHN LIPSCOMB



PHOTO CREDIT BOB VERGERA

•The Tilcon quarry at Clinton Point is dumping tons of fine stone and stone dust into Casper Creek – hence the large delta at the mouth of the creek. This sediment covers bottom vegetation and underwater habitat. Of course, they have a Department of Conservation (DEC) permit to discharge but Riverkeeper and the Pace Clinic have filed a notice of intent to sue to challenge the permit and permit violations.



PHOTO CREDIT JEFF ANZEVINO

•This aerial photo was taken on October 5, 2005 by Jeff Anzevino of Scenic Hudson as he flew down the river conducting an inventory of active development projects. Riverkeeper's boat can be seen in the foreground patrolling the loading docks at the Tilcon quarry at Clinton Point.



• During every monthly patrol north, we invite regional and state officials, planners and land trusts to join us for the stretch between Catskill and Albany. This is the "wildest" section. There are no roads or rails along the shore for most of this stretch so the best (only) way to really appreciate this part of the river is by boat.

We hope the river will inspire these people so they'll go back to their offices and create ways to protect it. Several in this particular group are from Columbia County. The others are from Columbia University – looking at urban planning at a regional level. We're looking at shoreline tax maps which show who owns the riverfront parcels.



• Acting on a tip from a Riverkeeper Watchdog, we are investigating oil escaping into the Croton River from the bank at the Metro North rail yard at Croton Point. When we disturb the bottom sediment, oil bubbles to the surface. We are negotiating with Metro North and, so far, they seem

eager to cooperate. They have hired an engineering firm to study where the oil is seeping from. This site has a long history of contamination – I've met a number of men who've worked here in the past and they all say "the place was a mess, oil everywhere." (See photo below).



• Oh my! Could this be global warming? Not yet – just flooding at Catskill from very heavy rains in October. Let's call it practice.



• We're finding the oil near this storm drain at the southern edge of the Metro North rail yard at Croton Point. The oil could be migrating along the ditch where the storm drain pipe is laid.

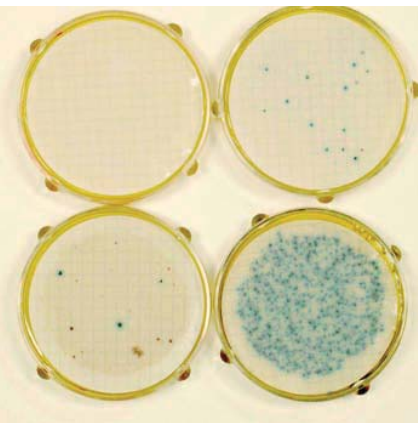


PHOTO: LAMONT-DOHERTY EARTH OBSERVATORY

times! Other locations that I swore were clean turn out to be VERY contaminated.

Riverkeeper and Lamont-Doherty are seeking funding to continue and expand the study. This kind of monitoring is something Riverkeeper would like to build into a permanent part of its operation. Until then, we plan to continue with the pilot study in the spring, with the hope of obtaining funds to continue the work into the future.

The four bacterial growth plates in the photo on the upper left hand side of this page show the variability in bacterial contamination caused by wet vs. dry weather which we see at many locations between the George Washington Bridge and Stony Point. Sewer lines and sewage treatment plants sometimes (often) overflow during rain events – they don't have the capacity to handle the rain water that gets into the system.

Blue spots on the plates are individual bacterial colonies of *Enterococcus*, a sewage-indicating microorganism. The plates on the left are from dry periods; the plates on the right are from wet periods. The top two plates are from midchannel near the GW bridge; both plates are within federal guidelines for safe swimming – it's ok whether or not there's been rain. The bottom two plates show the kind of result we see at a number of tributaries between Stony Point and Yonkers. The bottom left plate shows the water is ok in dry weather but the bottom right plate, collected during wet weather, shows contamination more than 10 times higher than acceptable levels. At these locations, contact with the water during and after the rain could be dangerous and presently there is NO WAY for the public to know.

• Is the water safe for swimming? That's the question we hear most often. The State says yes, kind of. But no federal, state, county or municipal authority really tests enough to know, especially upriver of Manhattan.

Since last summer we've been working with a team from Lamont-Doherty Earth Observatory/Columbia University on a pilot water quality sampling program. Our goal is to examine the importance of weather events, tributary inputs, and wastewater discharge on the River's water quality. So far, we've sampled for 10 days between Stony Point and NY Harbor. Samples were collected in the deep water channel, at sewage treatment plant outfalls, in tributaries, and around NYC including the Harlem and East Rivers and Newtown Creek.

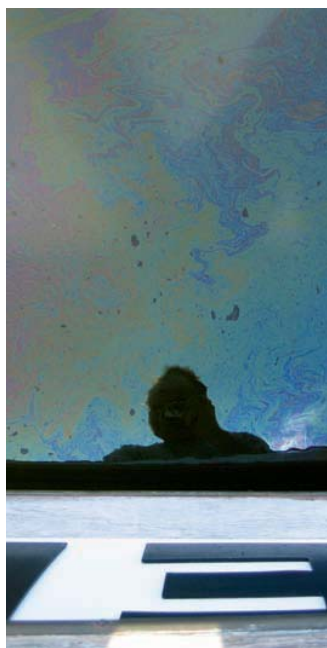
At each sampling waypoint, we measure oxygen, nutrients, salinity, temperature, total bacterial cell count, and *Enterococcus*, a microbe that indicates the exposure to human or animal waste, and that is a health hazard.

Our data is too preliminary to release at this time but we are getting some really astonishing results. Some places that I was sure would be filthy, turn out to be ok – some-



• Laurence Luo is going to be China's first Waterkeeper (in Beijing). He was in the US training last summer. We rode up the river together on the boat after a day on Newtown Creek.

Laurence wasn't too offended by Newtown Creek – he's seen much, much worse. The river downstream of Beijing is 100% sewage and effluent. He's fighting a monster. Hearing his perspective made me feel so lucky to have the Hudson River which is still so vital and alive, and so worth fighting for.



• Looking over the side at more oil on the water on Newtown Creek.



• Are they pushing this stuff into Newtown Creek on purpose? We'll never know. Basil got this cleaned up with a couple of calls. It's City-owned MTA property.



• We saw this swan on October 18th on Newtown Creek. That's the new sewage treatment plant in the background (really it's "partial treatment").

This swan was alone. We usually see them in pairs – they mate for life. It breaks my heart to see such a beautiful bird on this terribly polluted water. We work for the day when Newtown Creek will be clean for swans and other waterfowl to live in and prosper. Today we had to settle for herding this one towards the East River and relatively cleaner water.



• This piece of floating containment boom was stranded on some pretty degraded industrial shoreline in Ossining. We checked the boom for oil or other contaminants, contacted the Village Department of Public Works (DPW) and then on a Sunday, towed it around to the public launch ramp just south of the Ossining Boat and Canoe Club. Turns out it was "Secret Santa" day at the club so when we got to the ramp a dozen or so members came out and helped pull the boom up above the tide for the DPW to collect on Monday. I got a tour of the club and met the commodore. We talked about the river.

Yes, it was nice to clean up the boom, but finally, the best part of the day was getting to meet the members of this old and respected club.



• In November we took the skiff and visited Ramshorn Marsh, just south of Catskill. Signs say "NO WAKE – Sheriff's Office" and "NO HUNTING".

Riverkeeper is trying to get similar signage at Piermont Marsh which is an incredibly important habitat for many resident and migrating reptiles, mammals, fish and birds – and let's not forget kayakers. We've heard numerous complaints about high-speed boats and jet skis. So far we've asked the Palisades Interstate Park, the DEC, the National Estuarine Reserve and Rockland County Sheriff Marine Patrol to be the authority of record (on the sign) but we can't get anyone to step up to the plate. We'll keep trying.

Ramshorn is owned and managed by Scenic Hudson and Audubon as a "sanctuary". What a shame that the time has come when our fellow creatures need a "sanctuary" in the Hudson Valley.

thedocket

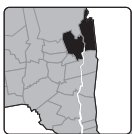
NEW CASES



Power Plant Federal Court Decision A three-judge panel of the U.S. Court of Appeals for the Second Circuit, in a decision with national implications, ruled that the Environmental Protection Agency's (EPA) proposed regulations dealing with water intakes on existing power plants were not in compliance with the Clean Water Act section 316 (b). These "Phase 2" rules, which were promulgated by the EPA in response to an earlier Riverkeeper litigation, were remanded to the Agency for further consideration in light of the court's decision. Cooling water intakes swallow billions of gallons of river, lake and coastal water to cool power plant machinery. Along with the water, the intakes devour countless fish and fish larvae, devastating fish populations across the country.

St. Lawrence Cement (Cementon, NY) Riverkeeper served notice of our intent to sue St. Lawrence Cement ("SLC") in Cementon, NY, for violating the federal Clean Water Act. Riverkeeper discovered illegal discharges of wastewater into the Hudson River during its helicopter patrol along the Hudson on November 27. While flying northbound, Riverkeeper staff discovered a huge, milky plume extending from SLC's cement facility nearly a mile out into the river.

UPDATED CASES



Hudson River PCB Superfund Site (Fort Edward, NY) The United States District Court for the Northern District of New York approved the Consent Decree between the United States Environmental Protection Agency and the General Electric Company to dredge the upper Hudson River. Removal of the PCBs is scheduled to begin in 2009, after construction of facilities to accommodate the Superfund cleanup. An effort by the Town of Fort Edward to intervene in the proceeding for the purpose of enabling local regulation of the site of the proposed dewatering facility was denied by federal judge David N. Hurd. GE began dispute proceedings to contest the EPA's interpretation of the Consent Decree regarding the replacement bathymetry (underwater terrain depth) of the shoreline after dredging and GE's responsibility to ensure that communities using river water have access to uncontaminated sources of drinking water during the cleanup. Both disputes were rejected by the EPA.



Danskammer Power Plant (Newburgh, NY) An Article 78 was filed on July 24, 2006 by the Pace Environmental Litigation Clinic. The lawsuit, filed in Supreme Court of New York State, alleges that the Department of Conservation (DEC) ignored the federal and state mandate to use the "best technology available" to avoid environmental damage caused by power plants using river water for their cooling water systems. On December 22, 2006 a reply was filed. It was also determined by the courts that the case will be heard in Ulster County and we expect that arguments will be heard in the early part of 2007.



HOTLINE CALLS

Each month Riverkeeper receives dozens of reports of possible environmental violations. Sabrina Wells, Riverkeeper's Watchdog Program Coordinator, assists the Hudson River Team by determining whether the matter should be dispatched to one of our Watchdogs for further investigation, referred to federal, state or local authorities, or become the subject of citizen enforcement action by Riverkeeper. Sabrina can be reached at 914-478-4501 ext. 242 or 800-21-RIVER or by sending an email to watchdog@riverkeeper.org. The following are samples of reports received by our pollution hotline:

- **Woodbury, NY** A citizen called to report that Combined Sewer Overflow (CSO) discharges had been occurring near Lilly Court in Woodbury, NY for several years. This area has a large number of children recreating in the vicinity. The caller was asked to send in pictures and Riverkeeper contacted a Watchdog in the area for continued monitoring of the situation. We continue to investigate this situation.
- **Lower Manhattan, NY** The Coast Guard called to inform us that a diesel spill had been spotted from Staten Island to the Bayonne Bridge and into Newark Bay. We were informed by the Coast Guard that they were investigating to determine the source, amount and whether or not it was only sheen or was recoverable product. We called the Waterkeepers in NJ to inform them of the problem. Riverkeeper continues to build a productive and informative relationship with the Coast Guard on oil spills and other issues.
- **Milton, NY** An anonymous tip from a concerned citizen has led Riverkeeper to investigate the Brooklyn Bottling Plant. The tipster informed us that the plant has been discharging well beyond its permitted allowances. Upon further investigation of Department of Environmental Conservation (DEC) records through a Freedom of Information Act request, Riverkeeper has found years of violations and citations. We will address the situation with the DEC and demand a more effective penalty.
- **Yonkers, NY** A local citizen called to report a possible petroleum product sheen on the Saw Mill River. Riverkeeper called local authorities and an investigation is underway.



News about Riverkeeper events, volunteers, staff and donors

City and rural kids to follow drinking water from source to tap

For three weeks in July, twelve high school students from Brooklyn and the Catskills will join together for an exciting expedition through the New York City watershed to learn about the ecosystems that provide the City's drinking water, and the economic and public policy aspects of protecting this critical natural resource.

Six students from New York Harbor School, a New York City public school in Bushwick, Brooklyn, and six students from Sidney High School in the Catskills will follow, on foot and by boat, New York City's drinking water supply from its source near the Catskill Mountains' highest peak to its destination at the tap. The goal of this educational project, "Mountaintop to Tap," is to empower the students to educate the public about the source and protection of this drinking water supply and the vital and little recognized connections between the City and its upstate watersheds.

The expedition is organized by the Stroud Water Research Center, New York Harbor School, the Catskill Center for Conservation and Development, NYC Department of Environmental Protection, and Riverkeeper. It marks the tenth anniversary of the New York City Watershed Memorandum of Agreement. This landmark accord was negotiated among dozens of federal, state, county and municipal officials as well as environmental and public health groups to protect the City's drinking water supply in its unfiltered state.

"This fun, rigorous, and unique educational expedition will bring students from very different regions together to raise their awareness of where this most vital resource – drinking water – comes from, and the work that has been done and must continue to be done to protect it," said Alex Matthiessen, President of Riverkeeper. "They will learn valuable lessons in geography, environmental science, public policy, natural resource management, environmental advocacy, and personal responsibility for the protection of natural resources. And, by working beside their inner city and rural counterparts, they will gain an appreciation for the complexity of the City watershed system and the need for disparate groups to cooperate as guardians of that system."

The expedition will include outdoor activities such as boating and hiking; hands-on experiments, such as water quality testing; and lectures, presentations and tours with scientists, elected officials, and experts on water quality and watershed protection policy. Along the way, the students will keep journals and take photographs which will be exhibited together at the South Street Seaport Museum, New York City, in October–November 2007 and in venues within the watershed. Enrollment is not open for the program, but for more information please visit www.stroudcenter.org/nytrek2007.

Recent Grants Help Riverkeeper's Patrol Boat and Enforcement Program

The **Hudson River Improvement Fund of the Hudson River Foundation** has granted \$5,000 for Riverkeeper to purchase an outboard engine to power our auxiliary boat, an aluminum skiff that provides us with access to the tributaries and shallows that our main patrol boat cannot reach. In addition to facilitating patrol and investigation in these waters, the skiff will support the work of researchers from leading scientific institutions such as Columbia University's Lamont-Doherty Earth Observatory. The grant will also enable Riverkeeper to upgrade safety equipment on the boat.

A \$4,000 grant from the **Norcross Wildlife Foundation, Inc.** has funded the purchase

of a notebook computer for the Riverkeeper patrol boat captain. The computer will enable the boat captain, who spends the majority of each working day on the River and its tributaries, to maintain regular electronic communication with staff at Riverkeeper headquarters and enforcement agencies, and with others, such as scientists and regional planners, who utilize the Riverkeeper boat. The computer, which is designed to withstand the outdoor environment, will also allow for immediate transmission of digital images of pollution to enforcement officials.

The Norcross grant has also enabled Riverkeeper to purchase an additional digital camera for our investigations.

In addition to these equip-

ment grants, Riverkeeper recently received contributions totaling \$8,500 to help cover the cost of fuel for the boat this year. **P&O Ports North America, Inc.** has generously provided \$7,000 and also secured an additional \$1,500 from **Girandola Construction, International Longshoreman's Association Local 824, and Trevcon Construction.** These contributions help us continue to run monthly patrols of the entire 150-mile estuarine portion of the River for almost ten months each year.

Riverkeeper is grateful to these foundations and organizations for their support of our patrol boat and our enforcement work.

EILEEN FISHER Inc. SUPPORTS LEGAL INTERNSHIP

Sarah Olinger, a third-year student at Pace University School of Law, joined Riverkeeper in January as a legal intern for the Hudson River team. Sarah's internship is made possible by a grant from EILEEN FISHER Inc., a long-time supporter of Riverkeeper and of programs that empower women.

As a student in Pace's Environmental Litigation Clinic last spring and fall, Sarah represented Riverkeeper in aspects of our successful Clean Water Act case against the City of New York for polluting Esopus Creek, a trout stream located in the Catskills. Sarah drafted our petition challenging New York State's final permit allowing the City to discharge sediment-laden water into the Creek. She also wrote a brief successfully challenging the City's effort to obtain U.S. Supreme Court review of the 2006 federal appeals court ruling in Riverkeeper's favor.

Since joining Riverkeeper Sarah has prepared comments on the final environmental impact statement for the proposed development on the site of the former General Motors assembly plant in Sleepy Hollow. She has also helped investigate the radioactive water leaks from Indian Point's spent fuel pools. Presently, Sarah is researching the legal issues concerning a proposal to build a desalination plant on the Hudson, and is also creating an environmental justice handbook.

Sarah is a graduate of Middlebury College where she majored in environmental studies. At Pace, Sarah is a Research and Writing Editor on the *Pace Environmental Law Review* and was also the Chair of the 2006 National Environmental Law Moot Court Competition. In October 2006, she was awarded first place in the New York State Bar Association's environmental law essay contest; her prize-winning essay on the regulation of carbon dioxide has been published in the *New York Environmental Lawyer* and will be published in the *Pace Environmental Law Review* this spring. In the summer, Sarah will begin a clerkship with U.S. Magistrate Judge Malachy Mannion in Pennsylvania.



PATAGONIA UPPER WEST SIDE'S ENVIRONMENTAL TEAM

Patagonia Upper West Side Lends Helping Hands to Riverkeeper

Riverkeeper and Patagonia connected in 2002, shortly after Patagonia's Upper West Side store location opened on Columbus Avenue across from the American Museum of Natural History. Through its Environmental Grants Program, Patagonia has contributed over \$10,000 to Riverkeeper projects, donated Patagonia clothing to our fundraisers and volunteered staff time at our events. Patagonia also has invited us into the Upper West Side store to talk directly to customers.

"Patagonia is proud to support Riverkeeper," said Tim Rhone, Store Manager at the Upper West Side location. "Protecting the environment is at Patagonia's core. We use our retail stores to find local environmental organizations to support. Riverkeeper is a great organization and environmental advocacy fits our grants program perfectly. We know helping Riverkeeper is the right thing to do."

Store staff members have been regular volunteers at Riverkeeper's annual Shad Festival and Hudson River Celebration, where they also generously provide sought-after Patagonia merchandise for our fundraising raffle. Employees from the Upper West Side store as well as Patagonia's Soho store also assisted last fall at Water Fest, a day of rafting and kayaking on the Hudson River in Manhattan that raised funds for Riverkeeper's programs. And Patagonia, Inc. donates a portion of the proceeds to Riverkeeper for every purchase made through our website link to the company's on-line store.

Riverkeeper is particularly grateful for a recent grant of \$5,000 from the Upper West Side store to support our grassroots organizing program to combat sprawl development in the upstate watersheds that supply New York City's drinking water. This is the second consecutive year that the Upper West Side store has supported the sprawl campaign, and the third grant the store has made toward Riverkeeper's New York City drinking water protection program.

"We are fortunate to have our friends at Patagonia's Upper West Side store as volunteers, advocates, and supporters," said Alex Matthiessen, President of Riverkeeper. "They are always willing to help in any way they can, as people who believe in Riverkeeper's mission and as employees of an inspiring company that has devoted itself to environmental causes."

All of us at Riverkeeper thank the staff at the Upper West Side store for their energetic support, and look forward to working with them again soon.

For more information on Patagonia's environmental efforts, please visit "Environmental Activism: What We Do" at www.patagonia.com. To support Riverkeeper by purchasing Patagonia merchandise through our website, please visit Riverkeeper's online store, http://riverkeeper.org/support_donatenow.php.

RIVERKEEPER HOSTS TWO PREMIER NEW YORK CITY EVENTS

The First Annual “New York Water Fest”

The fall of 2006 marked a very busy season of Riverkeeper events and new community outreach efforts. Under a gorgeous blue sky on a warm October Sunday, Riverkeeper and Ray Fusco, Inc. proudly debuted the 1st Annual New York Water Fest, a day-long event of water paddling fun featuring New York City’s first premier Hudson River water race, the New York City Mayor’s Cup Kayak Championships, and the Big Apple Splash-Hudson River Float. The purpose of Water Fest is to raise awareness about the importance of the Hudson River to New York’s history, commerce, arts and culture, as well as about the sources of and threats to New York City’s first-rate drinking water.

“Riverkeeper is launching Water Fest as a way to celebrate the critical role water plays in the lives of New Yorkers. We drink it, we boat, swim and fish in it, and we draw inspiration from having it all around us,” said Alex Matthiessen, Hudson Riverkeeper and President. “The Hudson River estuary and the upstate watersheds that provide New Yorkers with our drinking water are two of New York City’s greatest assets. Water Fest will be a fun-filled way to come together each year and renew our commitment to protecting the waters that enrich our lives.”

With the sun peeking over the water, the day kicked off with the Mayor’s Cup, an elite kayaking race around the island of Manhattan. The Mayor’s Cup, New York City’s largest water event, began at the North Cove Marina and featured paddlers competing in two different categories—the Elite Open Class and Sea Kayak Class. Two-time Olympic gold medalist kayaker Greg Barton earned the coveted first prize, completing the race in record-breaking time.

The festivities continued with the Big Apple Splash, a five-mile, open-to-the-public amateur race in which dozens of non-motorized rafts floated from Pier 96 to North Cove at Battery Park. Following the water races, competitors and guests enjoyed live music and a waterside gourmet picnic while listening to remarks given by Hudson Riverkeeper’s Alex Matthiessen and Board members Robert F. Kennedy, Jr. and Mike Richter.

Sponsors for Water Fest included: Confluence Water Sport, Kokatat, LeCroy, Credit Suisse, Union 1199, Durst Corporation, Capital Trust, Clif Bar, Cytomax Sports Drink, 66 Degrees North, Kiesendahl & Calhoun Contemporary Art Gallery, *Canoe & Kayak Magazine* and *Outside Magazine*.

Riverkeeper would like to thank the offices and staff at the Downtown Boathouse-Pier 96, Battery Park City Parks Conservancy, City of New York, Hudson River Park Trust, New York City Sports Commission, NYC Sports Development Corporation, North Cove Marina Management, Inc. and the Carey Battery Park City Authority.

Mark your calendars – the 2nd Annual New York Water Fest is scheduled for October 14th! For more information or to see pictures from the 2006 event, please visit www.nywaterfest.org.



PHOTOS COURTESY OF ALAN WEISS

A KAYAKER AGAINST THE CITY SKYLINE.



NEW YORK HARBOR SCHOOL STUDENTS WITH ROBERT F. KENNEDY, JR. AND EARTH RIVER'S ERIC HERTZ.



2006 WATER FEST MAIN STAGE.



OLYMPIAN GREG BARTON CELEBRATES THE FIRST NEW YORK CITY MAYOR'S CUP CHAMPION TITLE WITH HUDSON RIVERKEEPER & PRESIDENT ALEX MATTHIESSEN.

RIVERKEEPER HOSTS TWO PREMIER NEW YORK CITY EVENTS

(Continued from page 33)

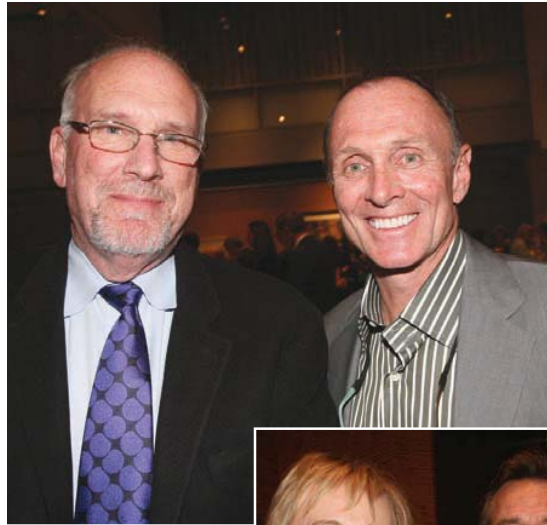
Fine Waters of the Hudson to the Fine Arts...

Weeks later Riverkeeper went “uptown” and held Reflected Light III—an art auction to benefit Riverkeeper. Hosted by Chairs William Abranowicz and Peter MacGill, this premier art event at Sotheby’s raised nearly \$400,000! Over 700 guests mingled amidst the fine art and were treated to a hilarious program with guest emcee Martin Short.

Due to “auction fatigue” among the New York City philanthropic community, Reflected Light’s benefit committee was faced with the onerous task of securing support from an already exhausted art community. Led by Pace/MacGill gallery owner Peter MacGill, committee members not only secured work by world-renowned artists such as Chuck Close, John Alexander, Alexis Rockman, Joann Verburg, Jacques Lowe and Alexander Calder, but they were also gratified by the artists’ appreciation of Riverkeeper’s history and mission. Peter noted, “It is next to impossible to secure artwork for charity auctions these days. The only thing that allowed us to persevere was that the artists and collections could clearly understand what Riverkeeper does and how much their support could mean. People support Riverkeeper because they believe in what Riverkeeper is trying to do.” Artist and Benefit Committee member Stephen Doyle added, “Optimism is the new black, and Riverkeeper faces the future of the Hudson River with a great big smile. The auction serves as a great magnet for a great cause, bringing together a wonderful crowd of people who care—and collect!”

The evening also presented *Condé Nast Traveler’s* Editor-in-Chief Klara Glowczewska with Reflected Light’s first honoree award. Riverkeeper is proud to present this honor to Klara for her commitment to reporting on global environmental issues.

Reflected Light III is an event that would not have been possible without the dedication and generosity of Peter MacGill, Bill Abranowicz, Andrea Raisfeld, Art+Commerce, *Conde Nast Traveler*, our 2006 sponsors and all of the members of the Benefit Committee and Riverkeeper’s Board of Directors. Thank you to everyone for their tireless efforts and commitment to Riverkeeper.



PHOTOS COURTESY OF DOUG GOODMAN



PHOTOS CLOCKWISE FROM TOP:

DR. HOWARD A. RUBIN AND WILLIAM ABRANOWICZ

KLARA GLOWCZEWSKA, ROBERT F. KENNEDY, JR. & MARTIN SHORT

RIVERKEEPER BOARD MEMBER MICHAEL RICHTER, ROBERT F. KENNEDY, JR., RICH HANDLER, LYNN SAMBERG, BRAD KLEIN, AND ALEX MATTHIESSEN

ANDREA RAISFELD, PETER MACGILL, MARLENE PALTROW, ALLAN WINTERS, AND RICHARD RIEGER

UN Sung

A N N E G E O R G E S

HEROES

BY LISA RAINWATER

Calling to protect the environment came early to Riverkeeper's latest *Unsung Hero* Anne Georges, Senior Legislative Assistant to Congressman Maurice Hinchey (D-NY, 22nd District). Growing up in Waukegan, Illinois, Anne recalls her first awakening to environmental awareness when, as a teenager, she realized that all was not well in her small Midwestern town: Polychlorinated Biphenyls (PCBs) were discovered in the Waukegan Harbor. Around the same time, Anne recalls having vivid nightmares in 1972 about a proposed nuclear power plant that was to be built just north of her hometown, one that was finally shut down in 1998 after problems in the control room. It was at this young age that Anne resolved to continue her environmental education and decided to pursue an environmental studies certificate along with her baccalaureate degree at the University of Wisconsin-Madison.

Riverkeeper's *Unsung Hero* title is awarded to an individual who often works behind the scenes to protect the Hudson River and its watershed. It should come as no surprise, then, that Anne Georges calls her job with Congressman Hinchey "extremely rewarding." Working for the Congressman—one of the strongest environmental advocates in New York's Hudson Valley congressional delegation—Anne has her work cut out for her, dealing with many of the same issues that interested her as a teenager, but this time they're New York-based issues: PCBs in the Hudson River, safety issues at Indian Point, and volatile organic compounds such as Trichloroethylene (TCE) poisoning constituents' homes and property. But even at the end of a workday, Anne is always ready to hear of yet another issue affecting the district and is more than eager to start working on a solution.



She chalks it up to her boss, "I genuinely like my boss. He is so active on these issues and not afraid of anybody—the oil and gas industry or General Electric. He's courageous and fights for the people. My motivation has definitely increased since I've been here. It's just such a pleasure to work for somebody who 'truly gets it.'"

For over two decades, Anne has focused on protecting the nation's air, waters and land. She has an impressive background in not-for-profit environmental work, having served as Assistant Director for Government Affairs for the National Audubon Society and Director of Government Affairs for the National Association of Conservation Districts.

In both positions, she developed policies and secured funding for water quality, land preservation, wetlands protection, and agricultural conservation programming. Anne also worked as Legislative Director for Congresswoman Rosa L. DeLauro (D-CT) and as Senior Appropriations Assistant to Congressman David R. Obey (D-WI). This crossover from advocacy work to government has provided her with the acute acumen needed to see an issue from all angles and to make decisive recommendations to both constituents and elected officials.

Following the lead of her boss, Anne

Georges is a strong believer in clean energy. Since this is one of Congressman Hinchey's primary issues, she assists in developing policy initiatives that provide for the development of environmentally sensitive energy sources and simultaneously tackle the demand side of the equation by fostering smart energy use emphasizing efficiency and conservation.

While she spends a great deal of time in Washington, D.C., Anne enjoys returning to the district as often as possible. Some of her favorite spots include Ithaca—for the university flair and gorges, the Delaware region for its rustic scenery, and Newburgh for its historical beauty. Living in the nation's capitol can be hectic, so Anne tries to get back to nature as much as possible. An avid horse rider, she serves as a trail guide for tourists in Rock Creek Park, located in the D.C. metro area, one of the first national parks in the country. "I feel fortunate that I can interact with nature while showing off our beautiful national park on horseback nine months out of the year," she explains.

Over the years, Anne has assisted Riverkeeper on many of our key issues – Indian Point, GE's PCB contamination, and hopefully with Congressman Hinchey leading the way, clean, renewable energy will soon become the policy of the day. As is often the case, our *Unsung Heroes* feel more comfortable remaining behind the scenes, doing what they do best—making things happen. For Anne Georges, she notes that it is invigorating to be a part of Congressman Hinchey's team, "He teaches me a lot about New York and New York politics and about environmental policy. I am lucky—my job focuses on helping to protect the environment and public health in New York and around the country—and that's my pleasure." It's our pleasure as well, Ms. Georges.



Getting in touch with Riverkeeper . . .

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Save the Date!!!

SHADFEST

Sunday,
May 20, 2007



RIVERKEEPER
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