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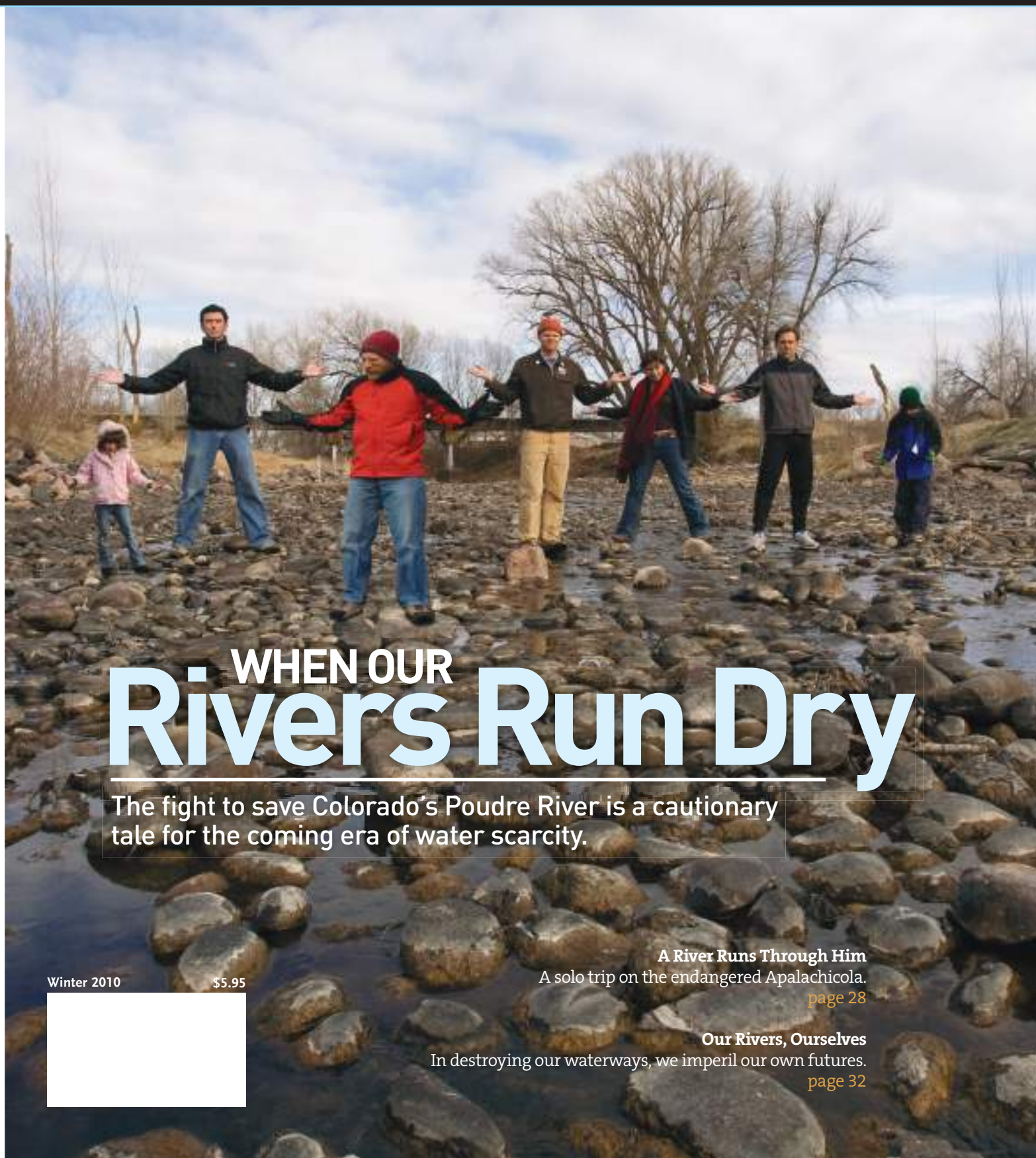

WHEN OUR Rivers Run Dry

The fight to save Colorado's Poudre River is a cautionary tale for the coming era of water scarcity.

A River Runs Through Him
A solo trip on the endangered Apalachicola.
page 28

Our Rivers, Ourselves
In destroying our waterways, we imperil our own futures.
page 32

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J. HENRY FAIR

All Hands on Deck: Stop the Destruction in Appalachia

As pointed out over the summer in these pages, the destruction of the environment is always abetted by the erosion of democracy. Conversely, the struggle for the environment is bound inextricably to the struggle for democracy. Today, we write with the Clean Water Act in mind.

Born out of a grassroots movement to reclaim the commons from corporate polluters, the Clean Water Act should serve as a model to other nations of effective environmental law created through the democratic process. However, its exemplary status has been undermined. We are deeply troubled that this seminal environmental law can be completely subverted with just a simple permit from the Army Corps of Engineers.

That is what has happened. In their final days in office, Bush administration officials gave their friends in the mining industry a green light to conduct virtually unrestricted mountaintop-removal mining by gutting the 1983 "buffer zone rule." This regulation prohibited mining within 100 feet of larger streams if water quality, quantity or other environmental resources of the stream were harmed. Coal operators and the Bush Interior Department realized that they had to change the rule—which was unequivocal—in order to make legal previously illegal mountaintop-removal mining operations in Appalachia.

In redefining the rule, the Bush administration removed "valley fills" from the Clean Water Act's jurisdiction. This created a scramble by industry members, resembling a wild-west land grab, to submit mountaintop-removal permits. Normally, these applications would have been rejected under long-standing policy. But right now, there are 100 mountaintop-removal mining permits pending that, if approved, will destroy tens of thousands of acres of forests and mountains, and hundreds of miles of streams. To get a sense of the scope of the industry's frenzy, consider that there are at least that many permits already in force for companies currently conducting mountaintop-removal mining operations.

This untenable situation may well be

the first great test of the Obama administration's resolve in handling threats to our environment. So far, the administration appears to be failing that test.

More than a year has passed since the 2008 Presidential Election and the Interior Department has done nothing to protect the public and the environment from the renewed disaster of mountaintop-removal mining. The department is responsible for overseeing enforcement of the Surface Mining Act, which prevents the dumping of mine debris and waste into watersheds and river valleys. Despite this clear responsibility, it has allowed illegal dumping and illegal mining not just to continue, but to spread.

On Friday, October 30th, Interior Secretary Ken Salazar filed papers in federal court stating that his department will delay its promise to rescind the Bush administration's gutting of the buffer zone rule. Secretary Salazar made it clear that Interior would not even propose a regulation to replace the Bush rule for several years. This delay is inexplicable and especially troubling, since the Interior Department is a body that has the ability to make new rules, and has the capability to restore protections to our most vulnerable waterways and the suffering communities that depend on them. The department could begin that process as early as today, but it dithers and delays.

Unbelievable but true: Ten months into this administration, the Obama Interior Department has taken no steps to curb the abuses of mountaintop-removal mining. Thus far, the department's actions under the present administration are indistinguishable from those of the Bush administration. Interior has abdicated its responsibilities.

This has forced the Environmental Protection Agency to step into a massive gap, acting alone to challenge illegal and destructive mountaintop-removal mining. Right now, EPA is in the process of reviewing 79 mountaintop removal permit applications. Without the ability to modify rules or interpret the law, what can EPA actually do to stop the destruction?

Consider that earlier this year, EPA Administrator Lisa Jackson issued two letters to the Army Corps of Engineers objecting to proposed mining operations in West Virginia and Kentucky. In the letters, issued in March, Jackson recognized that these two projects pose significant threats to "aquatic resources of national importance." She called for both to be shut down. This was manna in the wilderness for rural communities and environmentalists, while it made mining interests extremely worried that their new bonanza could have a delayed payoff, or worse yet, might be halted.

Mountaintop-removal coal mining has already destroyed nearly 2,000 miles of mountain streams in Appalachia.

With the letters, Ms. Jackson put the mountaintop mining industry on notice that it would be the focus of closer scrutiny, asserting that EPA would more closely review the environmental impact of their operations. "The two letters reflect EPA's considerable concern regarding the environmental impact these projects would have on fragile habitats and streams," Jackson said in a statement. "I have directed the agency to review other mining permit requests. EPA will use the best science and follow the letter of the law in ensuring we are protecting our environment."

This could mean that the Army Corps of Engineers permits, which don't require much more than a rubber stamp from the corps, might be more difficult to come by. The industry was initially outraged at EPA's change in policy direction. William Raney, president of the West Virginia Coal Association, claimed that rural communities would suffer, losing access to the same life the rest of America leads. "Does this mean…we're not going to have roads… we're not going to have Wal-Marts?" he asked in the Washington Post.

But citizens groups in West Virginia were overjoyed at the eleventh-hour reprieve represented by EPA's action. Citizens know that their communities do not benefit from mountaintop-removal mining; they recognize that powerful banking and corporate interests are bending the rules to their will, and are not looking forward to the next generation but to the next quarterly earnings report.

Skilled miners have long recognized that their way of life has been virtually erased by the coal companies' reliance on mountaintop removal. At the same time, people who live adjacent to these destructive mining operations, or downstream from them, recognize that their very lives are threatened by the pollution pouring down on them. And so far, this is pollution for which the Interior Department refuses to hold mining companies accountable. And sadly there's a lot of it.

Mountaintop-removal mining is so destructive that it necessitates either removal of streams on the mine site or their burial beneath valley fills composed of millions of tons of mining waste. The harm wrought is unprecedented; mountaintop removal has permanently destroyed nearly 2,000 miles of mountain streams in Appalachia, by federal and other estimates. In the headwaters of Spruce Fork watershed in West Virginia, permits for surface mining and valley fills cover 35.5 percent of total stream length.

In light of foot dragging in the Obama administration, what the EPA is doing is beginning to look downright heroic. But the EPA can't change the law, and it can't stop the immense destruction. What the administration must now do is immediately re-propose the 1983 buffer zone rule and issue guidance announcing that it will enforce these regulations until the final rule is in place. There is simply no reason for the administration to delay, not when the lives and health of our citizens and the environment we all share are at stake. **W**

ON THE COVER

What happens on Colorado's Poudre River will likely foreshadow the fate of many of America's most endangered rivers.

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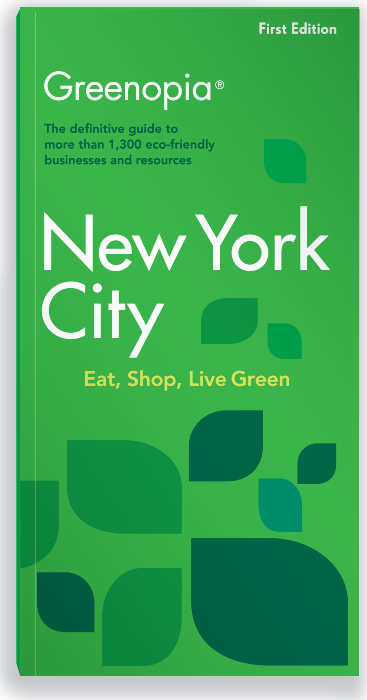

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DR. GERRY PINTO

Turning the Tide on the Green Monster

Massive algae blooms in Florida's St. Johns River this past summer turned the river into a slimy, green mess.

For years algae blooms have plagued Florida's beaches, lakes, rivers, and springs, threatening public health and closing swimming areas. But there is renewed hope that the tide may have finally turned against the "Green Monster." As the result of a lawsuit filed more than a year ago by St. Johns Riverkeeper, the Florida Wildlife Federation, the Sierra Club and several other Florida environmental groups, the U.S. En vironmental Protection Agency has agreed for the first time to set quantifiable limits for the nutrient pollution that triggers harmful algae blooms in the St. Johns River and other Florida waters.

Nutrient pollutants, such as nitrogen and phosphorous, enter rivers, lakes and coastal waters from fertilizer runoff, farms, septic tanks and utility and industrial wastewater discharge. These pollution sources can nourish algae blooms that blanket the surface of waterways, causing harm to plants, animals and humans. Exposure to toxins emitted by the algae can cause rashes, skin and eye irritation, allergic reactions, and even serious illness.

The public interest law firm Earthjustice filed the suit on behalf of the groups. The suit challenged an unacceptable decade-long delay by the state and federal governments in setting limits for nutrient pollution. EPA's agreement to set enforceable, quantifiable nutrient limits settles that lawsuit.

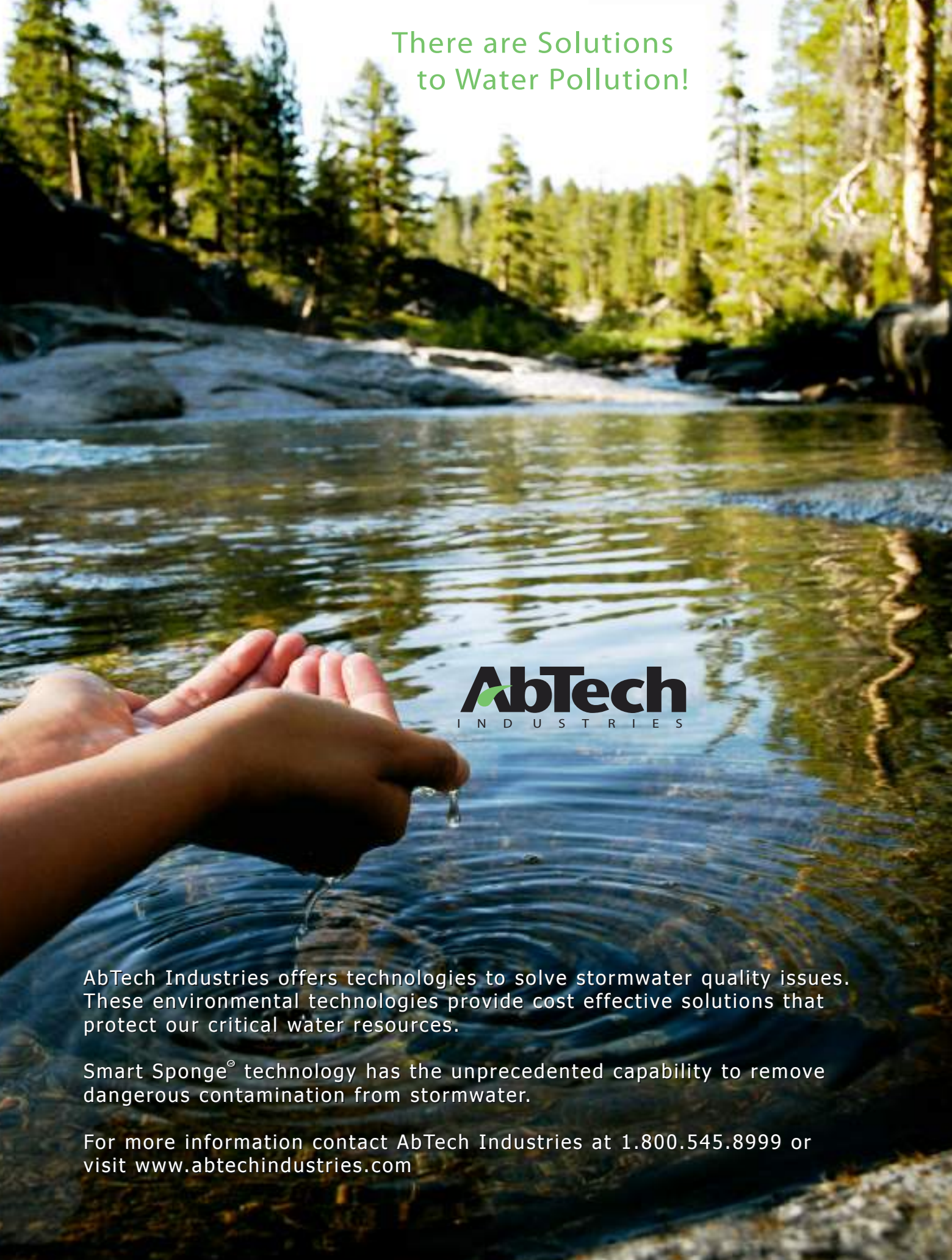
The agreement has nationwide implications. Currently, Florida and most other states have only vague limits regulating nutrient pollution. The EPA will now begin the process of imposing quantifiable—and enforceable—water quality standards to combat nitrogen and phosphorous.

Under the settlement, the EPA has until January 2010 to propose the new pollution limits for Florida's lakes, rivers and creeks, and until October 2010 to finalize the rules.

"The EPA's ruling couldn't have come at a better time for the St. Johns," says St. Johns Riverkeeper Neil Armingeon. "This past summer, nutrient pollution once again caused the appearance of the "Green Monster" and has made the river potentially unsafe for residents and wildlife. This ruling paves the way for meaningful river restoration."

Environmentalists hope the agreement will move the EPA to set similar standards in other states.

To view the press conference held along the banks of the St. Johns River announcing the agreement, visit **http://www.youtube.com/watch?v=T283tCLpe40&feature=related.**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Lake Ontario Waterkeeper and Cement Company in Landmark Agreement

LAKE ONTARIO WATERKEEPER

Lake Ontario Waterkeeper and Lafarge, the world's biggest cement maker, announced a precedent-setting agreement in the fall to modernize a cement-kiln-dust landfill site located on Lafarge's property near Kingston, Ontario, Canada.

Lafarge opened the landfill on its property in 1975. Cement kiln dust (CKD) is the dust captured from the kiln's exhaust gas by a filter system during the production of cement. It is a fine-grained, solid, highly alkaline waste made up mostly of fuel ash and is a corrosive, toxic substance. Exposure to wet kiln dust can cause serious, potentially irreversible tissue damage to the skin, eyes, or respiratory tract due to chemical burns, including third degree burns. For years, Lafarge had been dumping tens of thousands of tons of CKD into its landfill—almost as much waste as a city of 100,000 people would produce in a year.

Lake Ontario Waterkeeper's biggest concern was the untreated leachate that flowed from the site into Bath Creek, which runs from the landfill through the town of Bath and into Lake Ontario. Lafarge's operating license allowed the company to continuously discharge its waste into the creek, as long as the toxic wastewater was not likely to kill more than 50 percent of the fish it might reach.

Lake Ontario Waterkeeper had been in discussions with Lafarge since 2000, in an effort to contain the waste at the landfill. Under the terms of the agreement, Lafarge will cap the landfill, and improve monitoring and other measures to protect nearby Bath Creek. Pending government approval, Lafarge will immediately begin work on the landfill site.

LISA RYAN, HACKENSACK RIVERKEEPER

Hackensack Riverkeeper Busts Hotel Polluter

When Bill Sheehan founded Hackensack Riverkeeper in 1997, the lower Hackensack River was regarded as one of the most polluted waterways in America. "Lots of people thought the river was a lost cause and the Meadowlands (the river's estuary) was a wasteland that should be paved over," Sheehan says. Since then he's led the fight to restore the Hackensack and has played a central role in the river's remarkable turnaround.

During that time, Sheehan has developed a reputation locally as the river's greatest champion, which has served Sheehan well over the years. It did once again this past May when an employee of the Crowne Plaza Hotel in Secaucus approached Sheehan in a parking lot with a tip that hotel workers were dumping hundreds of gallons of raw sewage from the hotel directly into the Hackensack River.

"I played in these swamps as a kid," Sheehan says. "I take things like this personally." His first thought was to sue the hotel. "But I knew that as soon as the hotel received the required 60-day letter of intent to sue, they'd fix the problem, which would make citizen enforcement very difficult." He also considered turning over the case to the New Jersey Department of Environmental Protection (DEP). But he wasn't confident that DEP enforcement would be diligent enough.

"Then," says Sheehan, "I remembered the magic words 'knowingly and purposely.'" That was the phrase that escalated the case to the criminal level. He contacted Edward Bonanno, the head of the Environmental Crimes Section of the N.J. Division of Criminal Justice, with whom he'd worked before, and shared the information he had received.

In June a team of detectives and a DEP water inspector executed a search warrant at the hotel to investigate the sources of the wastewater, conduct tests, and seize related records. The investigation culminated in September with the indictment of the hotel's corporate owners, RD Secaucus LLC and Montreal-based Rosdev Hospitality Secaucus LP, charging them with third-degree unlawful discharge of a pollutant.

The indictment alleges that hotel staff rigged a pump and hose through which hundreds of gallons of sewage, chlorine and other chemicals flowed unhindered into the Hackensack River.

If convicted, New Jersey's Water Pollution Control Act provides for a fine of $75,000 for the violations. Moreover, because the law provides that a violator can be liable for a separate fine for *each day* a violation occurs, the defendants potentially face millions of dollars in fines.

"I can be very open-mined and pragmatic, and people know that" Sheehan says. "But I can also be a horrible adversary."

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A Cleaner Bay and an Internet Café

TALL SOW

Twenty-five years ago, Hann Bay, near Senegal's capital city of Dakar, was one of the most pristine bays in the world. "Our bay was as beautiful as any in the Atlantic Ocean," says Hann Baykeeper Mamadou Ndiol. It was also one of Senegal's most important fisheries. Today, however, the bay suffers from numerous industrial discharges, urban wastewater pollution, illegal dumps, and more. And fishing is now prohibited there.

In 2006, Hann Baykeeper became the first African organization to join Waterkeeper Alliance. They went to work right away. The group turned up the heat on the local government to repair and re-open a waste water treatment plant that had been out of commission for a couple of years. Today over 60 percent of the area's wastewater is treated before entering the bay.

They also played a key role in coordinating the biggest clean-up event in Senegal's history, recruiting over 700 volunteers to participate in the "Journée de la Baie."

As a result of these early and significant successes, Reusablebags.com recently awarded $10,000 to Hann Baykeeper to support the creation of an Internet café in Hann Village, a community of 48,000 residents. Currently, the village has no Internet access.

The Internet café, which will be located in the same space as Hann Baykeeper's office, will provide the group with a sorely needed sustainable source of revenue. Internet fees will be collected daily. It will also help Baykeeper get its message out by making the office even more of a community focal point and by providing community members with training and the tools to access information online.

Next on the group's agenda is a website, which is already in the planning stage. "This is a huge step for us," says Baykeeper Ndiol, "and hopefully for Hann Bay, too."

Hann Baykeeper Mamadou Ndiol (second from left), Director Mbacke Seck (left) and Baykeeper staff proudly display the check from Reuseablebags.com that will finance their Internet café.

Un-damming the Klamath, Maybe

A high-profile agreement aimed at removing four outdated, fish-blocking dams on the Klamath River in Oregon and California by 2020—touted as the largest dam removal project in world history—made headlines coast to coast this fall.

The dams are owned by the utility PacifiCorp. The movement to remove them, which included Native American tribes, commercial fishermen, farmers, government agencies and environmental groups, is potentially the most successful large-scale dam removal effort in the nation. But Klamath Riverkeeper Erica Terence cautions that "much works remains to ensure that it actually happens."

For nearly a century, the dams have blocked fish from half the Klamath watershed, which winds from southern Oregon through the Cascades and Coast Ranges to California's Pacific Coast, and is the West Coast's third greatest salmon river.

Though several studies have shown dam removal will actually cost less than what PacifiCorp would have to pay to engineer federally-mandated fish passages and water-quality upgrades at the dams, the corporation steadfastly refused to face that reality until now.

Playing a pivotal role outside the dam removal negotiations, Klamath Riverkeeper worked with tribal and fishermen's groups to bring lawsuits and direct action against PacifiCorp and regulatory agencies. The coalition's pressure resulted in the U.S. Environmental Protection Agency citing the Klamath River and PacifiCorp's reservoirs for toxic algae, putting in jeopardy PacifiCorp's bid for the 401 clean water permits necessary to relicense the dams. That action proved crucial to steering the corporation toward a negotiated settlement.

The as-yet-unsigned final agreement to remove the dams requires state and federal legislation, as well as $250 million from cash-strapped California, where funding is tied to a controversial water bond that includes a number of potentially harmful water projects. Dam removal also hinges on authorization from the federal government in 2012.

Terence sees the package as a "complex but workable" set of solutions and says Klamath Riverkeeper will continue to play a key role watch-dogging the process and working to ensure the agreements are properly implemented.

But if dam removal is derailed, delayed or severely underfunded, Terence says, "Klamath Riverkeeper will leverage its unique position outside the negotiations to pursue alternative ways to get the four dams out as soon as possible."

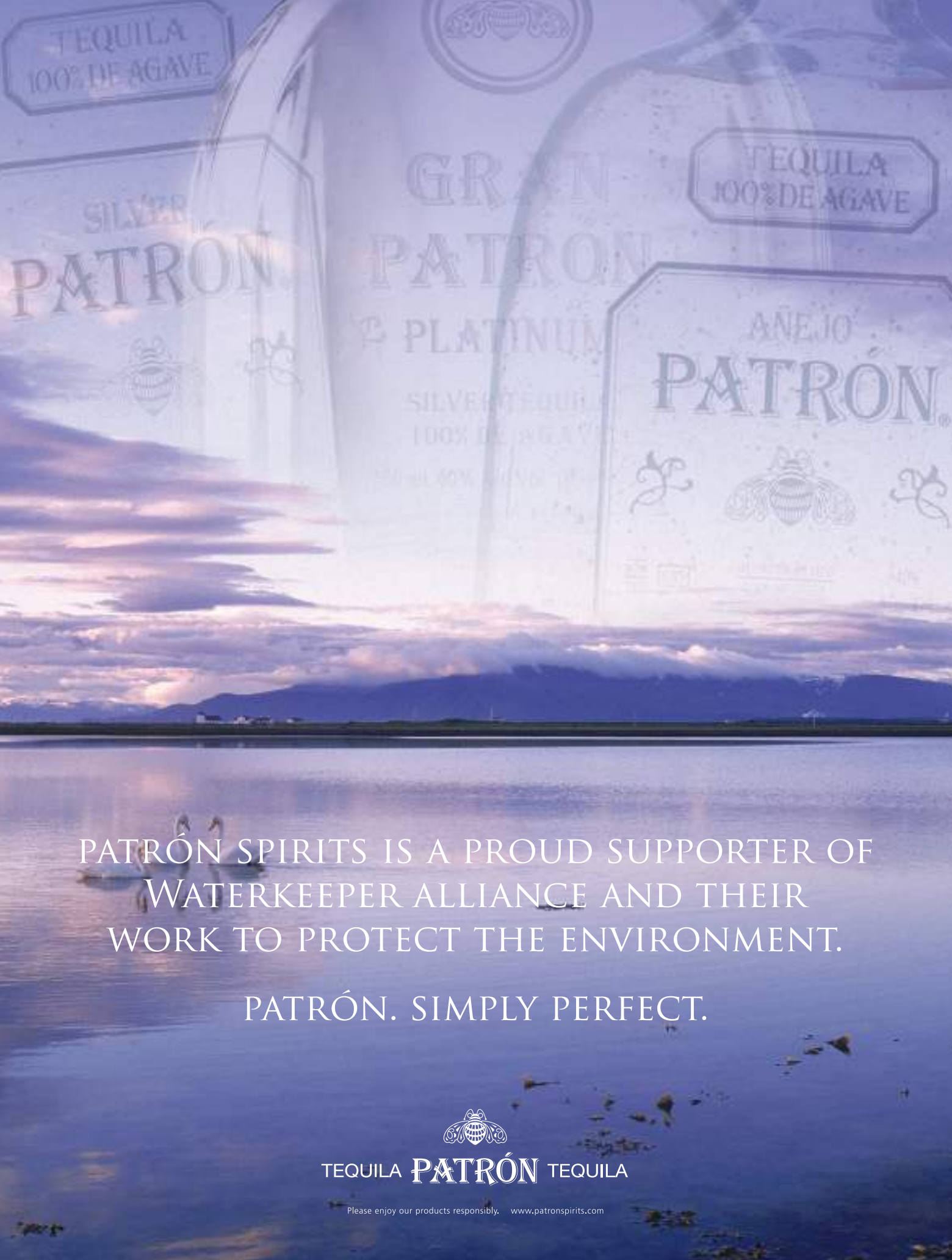
JC Boyle Dam, built in 1958 at river mile 225 on the Klamath River, is the newest and uppermost of the four dams on the river.

Copco I Dam, built in 1917 at river mile 198, is the oldest of PacifiCorp's Klamath dams.

Copco II Dam built in 1925 at river mile 197 on the Klamath River.

Iron Gate Dam, built in 1962 at river mile 190, is the lowermost of the Klamath dams.

SCOTT HARDING, KLAMATH RIVERKEEPER



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Linda Sheehan Named a "Coastal Hero"


CALIFORNIA COASTKEEPER ALLIANCE

Linda Sheehan, California Coastkeeper Alliance's executive director, was named a California Coastal Hero by Sunset Magazine and the California Coastal Commission.

She was recognized for her efforts as both an activist and an educator to clean up California's waters and to provide the public with the tools and information needed to hold government decision makers accountable.

Sheehan has achieved notable success protecting the health of coastal and marine waters by working to pass landmark legislation and policies that control pollution, improve coastal water quality monitoring, increase enforcement, and make state water data available to the public. She was honored along with eight other Coastal Heroes at a ceremony held at the Aquarium of the Bay in San Francisco to mark the 25th anniversary of Coastal Cleanup Day.

Under Sheehan's leadership, California Coastkeeper Alliance and its 12 member Waterkeeper organizations, which span the state's entire coast, have developed and posted the only statewide maps of California's most polluted water bodies. The group also restored giant-kelp habitat in the Southern California Bight, and conducted outreach to educate the public about the critical role of kelp forests in marine ecosystems. And Coastkeeper Alliance is playing a crucial role in the development of a network of marine protected areas off California's shores.

Clearing the Air

In an agreement with huge implications for the air Americans breathe and for the U.S. power industry, the U.S. Environmental Protection Agency has agreed to adopt rules reducing toxic air pollution from the nation's coal- and oil-burning power plants by November 2011. The settlement was reached as the result of a federal lawsuit brought against EPA by Waterkeeper Alliance and a coalition of groups that included Earthjustice, Natural Resources Defense Council, and Southern Environmental Law Center.

The lawsuit was based on EPA's failure to meet the Clean Air Act's deadline for issuing regulations controlling toxic air pollution from power plants. "The coal-fired utility industry was given a free pass by the Bush administration to poison our air and watersheds with toxic chemicals," says Waterkeeper Alliance's Director of Advocacy Scott Edwards. "We're hopeful that, under the current EPA, the years of irresponsible industry oversight are finally over."

Coal-burning power plants are the nation's largest unregulated source of mercury pollution, and also emit enormous quantities of lead, arsenic and other hazardous chemicals. Some 1,300 coal-fired units at existing power plants spew at least 48 tons of mercury alone into the air each year.

Significant human health effects are associated with these emissions. For example, much of the mercury and other metals in power plant plumes fall out within 100 miles of the source, and mercury accumulates up the food chain in fish and in the animals that consume it. Mercury exposure is linked to serious neurological disorders in humans, and reproductive and neurological effects in animals. According to the Centers for Disease Control and Prevention, eight percent of American women of childbearing age have mercury in their bodies at levels high enough to put their babies at risk of birth defects, decreased IQ and learning disabilities.

Under the Clean Air Act, EPA was required to control power plants' toxic air emissions by December, 2002. Instead, the Bush administration asked Congress to eliminate that requirement. Unable to win Congressional support for that request, the Bush EPA tried to declare that the required pollution controls were simply not necessary or appropriate.

The federal appeals court in Washington, D.C., unanimously rejected that attempt in February 2008, saying that the power industry remained subject to the requirement to control the air toxics it emits, and that EPA must issue rules governing those emissions. Following that court victory, Waterkeeper Alliance and its allies filed a lawsuit to compel EPA to issue its long overdue toxic air regulations. That lawsuit was resolved with the consent decree committing EPA to enforceable schedules for proposing and adopting the required rules.

STIR MARKETING

The Ad That Made Milwaukee Riverkeeper Famous

Milwaukee Riverkeeper Cheryl Nenn and her organization have made tremendous progress in the last 15 years cleaning up the Milwaukee River, which was once viewed by most Milwaukee residents as a dumping ground. "But we can still use all the help we can get," Nenn says. A local advertising executive, Steve Koeneke, volunteered to pitch in by creating an ad to help spread awareness of Milwaukee Riverkeeper's vision of swimmable, drinkable rivers.

Using Photoshop, the creative team, headed by Koeneke, superimposed an image of a water park slide on a photo of an actual river wall north of downtown Milwaukee, at an outfall near the city's Schlitz Park. They added the headline "A clean river is a fun river."

The ad was originally created for the Building Partners for Humanity program, a local ad contest that paired nonprofits with top ad agencies to inspire action that would enrich the community. After being picked as one of the winners, the ad went on to win a Merit Award in an international advertising competition—The One Show.

The ad eventually caught the eye of ABC News and was chosen as one of the 10 most creative in the world.

Thanks, at least in part, to all the media attention, Milwaukee Riverkeeper received permission from the city to paint a mural of the ad on the actual wall.

"We have a muralist lined up, but we still need the scaffolding to lower the artist down," Nenn says. The mural will be visible to all pedestrians passing on a nearby bridge, and to boats and canoes cruising by.

"It's great marketing for us and for the river," says Nenn. "And it will transform a forgotten wall into something beautiful—which is what we're trying to do with the whole river."

Steve Koeneke has since joined Milwaukee Riverkeeper's board and is working on ways to extend his successful ad into a broader campaign.

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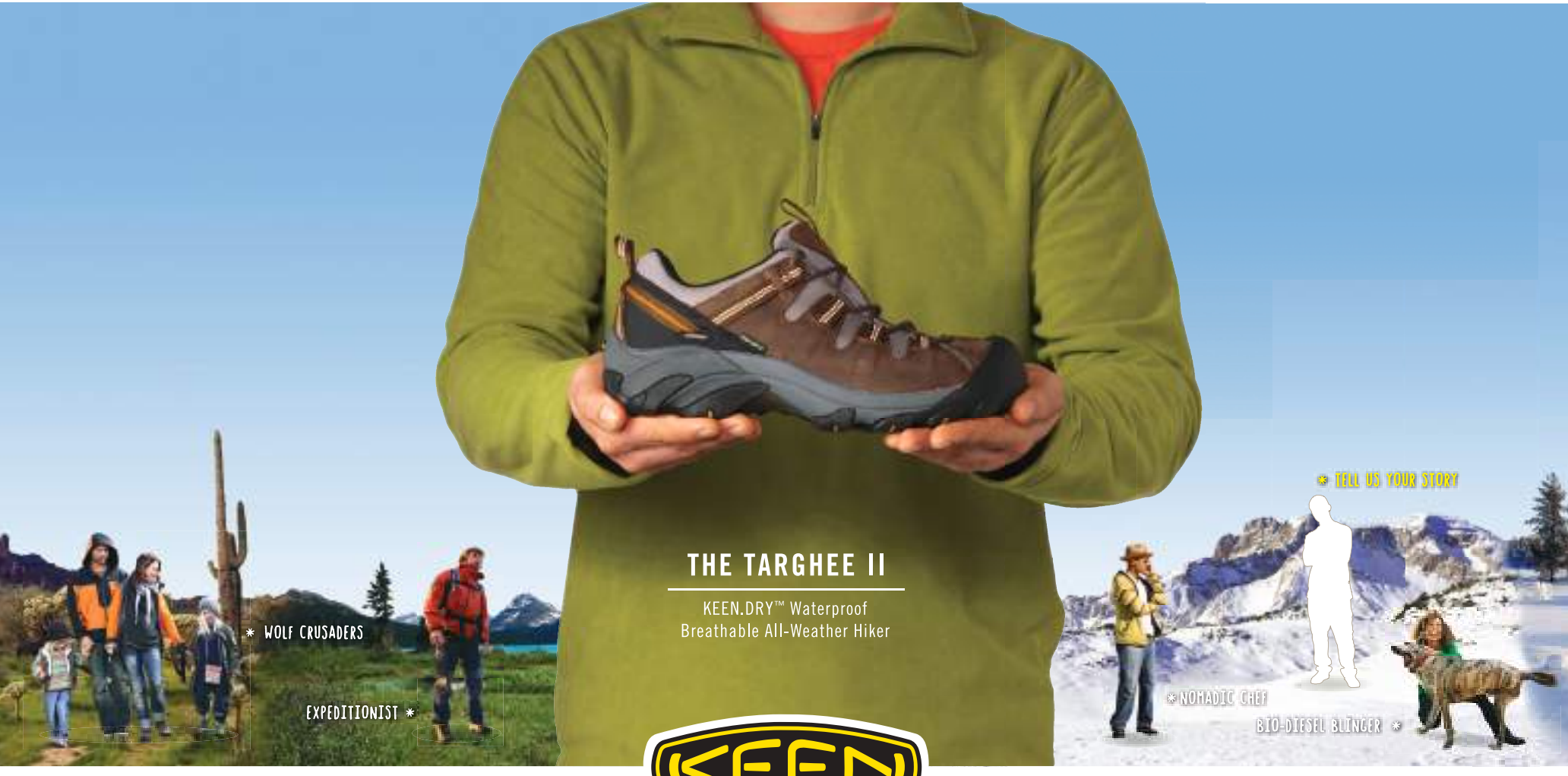

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KRISSY KASSERMAN

Kayakers paddling the Youghiogheny River a few miles upstream from the site of the proposed strip mine.

Proposed Strip Mine Stopped

Youghiogheny Riverkeeper and its sponsoring group, the Mountain Watershed Association, recently scored a major victory in the fight against strip mining in the Youghiogheny River watershed in southwestern Pennsylvania.

In August, the Fayette County Zoning Hearing Board denied a petition for special exception submitted by Amerikohl Mining for a proposed strip mine.

The exception was needed because the proposed mine was to be located in an area zoned for agricultural use, and the local zoning code only allows strip mining within agricultural areas by special exception. The zoning process is separate from the Department of Environmental Protection permitting process, and mining cannot proceed without the special exception.

The Youghiogheny River is roughly 132 miles long, and drains approximately 1,715 square miles. It flows into the Monongahela River near McKeesport, PA. The name "Youghiogheny" comes from a Native American word meaning "in a roundabout course" or "stream flowing back upon itself."

The site of the proposed mine, which was to cover nearly 500 acres, is surrounded by public lands. It also adjoins the Great Allegheny Passage, a heavily used recreational trail which connects Pittsburgh and Washington, D.C. Upwards of 250,000 people use the portion of the trail nearest the proposed mine each year, and Amerikohl had proposed closing the trail during blasting. The mine site is also located adjacent to Ohiopyle State Park, which annually hosts over 1.5 million visitors.

Amerikohl's proposal was also approximately five miles upstream from two drinking water intakes that together serve over 140,000 people, and within the source-water protection area for one of the intakes.

Mountain Watershed Association formally objected to the issuance of the special exception, and organized a major grassroots campaign to help support their objections. Over 50 people turned out at the hearing to offer testimony in opposition to the special exception request.

In their decision, the zoning board, which in the past had rarely denied requests for special exceptions from mining companies, cited concerns about noise, acid mine drainage, and potential damaging effects on surrounding lands. The company is appealing the ruling.

A Few Better Men

Murray Fisher has never thought of himself as a hero. But lots of other people have. And now it's official. Fisher, founder and program director of the Urban Assembly New York Harbor School—and a former Waterkeeper Alliance staff member, was recently chosen as one of five finalists in GQ magazine's "Better Men, Better World" search.

GQ asked readers to nominate "an agent of change striving for the betterment of society through charitable work, volunteerism, and/or community involvement." The nomination described Fisher as a "charismatic environmentalist and educator with unmatched drive, dedication, vision and compassion." The magazine selected the five best submissions as finalists. The winner will be chosen by popular vote.

Fisher left Waterkeeper Alliance in the fall of 2002 to found the Harbor School, a public New York City high school, with educational reformers Richard Kahan and Nate Dudley. Waterkeeper Alliance is one of the school's founding partners, along with South Street Seaport Museum and the Urban Assembly, a nonprofit group dedicated to creating small public high schools that provide high-quality education to students from low-income neighborhoods. Fisher says the inspiration for the school came to him during his time at Waterkeeper Alliance. "I saw in the work Waterkeepers did tremendous potential for an academic model focused on developing community leaders through work on and around marine-ecosystem protection," he says.

EMILY NEVILLE

Fisher and his team opened the Harbor School with 125 students in landlocked Bushwick, Brooklyn. Six years later, the school is flourishing, with 400 students in grades 9-12, and an average graduation rate of over 70 percent—almost three times the previous Bushwick average and far above most city schools with student from similar backgrounds.

The mission of the New York Harbor School is to raise academic achievement by connecting students with the harbor that surrounds the city. The curriculum emphasizes science, technology and the environment, and hands-on training in everything from boatbuilding to water-quality testing.

But the school desperately needed easier access to water. After a long and hard-fought battle led by Fisher, the school secured a site literally *in* New York Harbor. In September 2010 it will be moving to Governors Island. [See story on page 40.]

"Waterkeepers inspire me every day and Waterkeeper's philosophy shapes our academics and our students," Fisher says. "We have charged ourselves with changing the complexion of the environmental movement by recruiting more minorities and thereby increasing its inclusiveness and, ultimately, its effectiveness."

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They Just Keep Rowing Along

Like another famous denizen of the Mississippi River and its environs, Brett Rogers and the crew of the Old Man River Project have depended more than once on the kindness of strangers during their 2,400-mile journey down the Mississippi.

The six-person team set out from Bemidji, Minnesota, in late August in a 32-foot wooden boat named "Annie," built in the same style as boats used by fur traders in the mid-1800s to navigate the rivers of the United States and Canada. Their plan: to row and sail the entire length of the Mississippi and reach the Gulf of Mexico in early December.

One of the project's goals is to make the public aware of the incredible natural and cultural resource that is the Mississippi River by chronicling the stories of the people and places they encounter, which they are doing on their website (www.oldmanriverproject.org). Another is to support the mission of Lower Mississippi Riverkeeper Paul Orr and his organization. At the end of their journey, they plan to present Annie, which Rogers describes as "a floating piece of functional art," to Orr.

In late September, the Annie's masthead snapped off during a storm with 40-45-mph winds, just south of Minneapolis. In addition, four of the boat's six oars had broken along the way.

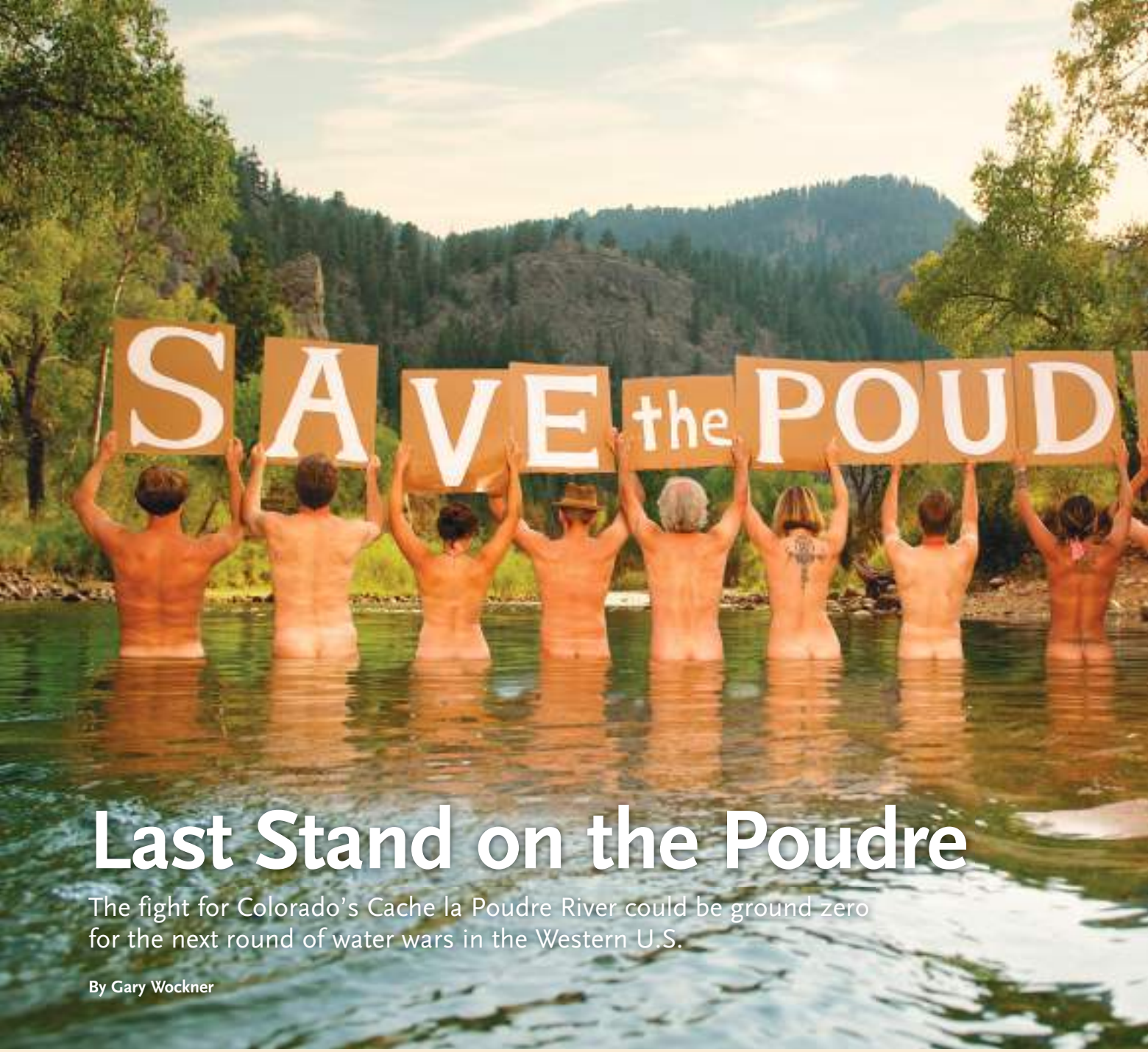
Quad-Cities Waterkeeper Art Norris had been closely following the crew's progress. "When Art heard we'd snapped our mast and broke our oars, he had an answer to the problem," Rogers wrote on the project's blog. "That's what Waterkeepers do. They don't wait for things to happen, they make things happen.

Norris contacted the owner of a local woodworking shop, Mike Lawrence, who agreed to craft a new masthead and four oars. The wood, from an old Mississippi railroad bridge, had been purchased by Norris at an auction four or five years before. "I almost cut it up for firewood last winter," he says.

"Art and Mike gave this expedition a second chance," Rogers wrote. "And Mike took on the job knowing we could not afford to pay his going rate. Instead he put a heap of craftsmanship into the project and never looked back. Any other craftsman would have charged us thousands for the work, especially in these tough economic times."

There is more. When the crew and their battered boat arrived in the Quad Cities, a local supporter was there to greet them with a box filled with $50 bills that he'd raised toward the cost of the repairs. "It was just enough money to help Mike recover some (but not all) of his cost," says Rogers. "Once again, the river provided us with a solution."

OLD MAN RIVER PROJECT



Last Stand on the Poudre

The fight for Colorado's Cache la Poudre River could be ground zero for the next round of water wars in the Western U.S.

By Gary Wockner

You may have heard this quote before, but I'm going to tell it to you again: "In the West, water flows uphill to money." I repeat this quote to convey a message. I got into this mad fight to save a beautiful river running through my town out of love, out of passion, out of spirit. Many of us—in fact, thousands of us—in Fort Collins and throughout northern Colorado are fighting with everything we have to keep our local river—the Cache la Poudre River—alive. But sometimes the fight seems endless. We have formed the Save the Poudre Coalition, but we haven't saved our river yet. We will, though. We are determined, racing uphill, like water to money in the West.

So here's my message to all of you fighting for a body of water that you refuse to let die: Learn about money. Learn who has the money to destroy your river, and who is making money from its death. Learn how greed combines with political power to ruin rivers. Learn who has the money to pay scientists and engineers to say and write things that are not true about your river. Read the profit statements and examine the budgets of the polluters and dam-builders who are killing your river, and learn about the cost of alternatives to their dams. Study ecological economics and the EPA's new standards on "cost/benefit analyses."

When your river gets dammed, drained or polluted, someone's getting rich. I know. I've watched it happen to our river.

The Cache La Poudre River begins in some of America's wildest lands, high in the peaks of

Gary Wockner is an ecologist and environmental activist. He is co-founder of the Save The Poudre Coalition, and was recently named the Poudre Waterkeeper. He is also a member of the City of Fort Collins Water Board. For more information about this issue, visit: SaveThePoudre.org.

COURTESY NEW BELGIUM BREWING

SAVE THE POUDRE

In the summer, thousands of Fort Collins residents cool off in the Poudre River, when the water level is high enough.

Opposite page: Local supporters stand tall, proud and naked in, and for, the Poudre River. The popularity of the photo, which was produced by New Belgium Brewing Company in Fort Collins, has sparked a yearly national river preservation campaign, "Skinny Dip for a Cause," underwritten by the brewery.

Colorado's Rocky Mountain National Park along the Continental Divide. From there the river rages down the canyons of the Front Range, dropping 7,000 feet as it flows north and east, then spills onto the eastern plains of Colorado, just west of Fort Collins.

Near its pristine beginnings, the rushing Poudre has the protections that come with its designation as Colorado's first and *only* "National Wild and Scenic River." But as it approaches those plains, it becomes immensely endangered—in 2008, the river conservation organization American Rivers named it one of the "Ten Most Endangered Rivers" in America. Along those last mountainous stretches, three large new dam-and-reservoir projects are being planned. They would cost more than a billion dollars of the public's money and drain the Poudre of its last free-flowing water. This destruction would subsidize and fuel population growth along the northern Front Range of Colorado, and feed the region's addiction to sprawling suburbs surrounded by irrigated bluegrass that doesn't grow naturally with the paltry 15 inches of annual rainfall. But so strong is our addiction to this backyard amenity and other ways of wasting water that even these dams and reservoirs won't be enough.

In addition to these threats, two new colossal projects are planned that will suck water out of the Green River and Yampa River—300 miles away—and pipe and pump it up and over the Continental Divide to the sprawling northern Front Range. Because of all of these projects, northern Colorado and the Cache la Poudre River are considered to be ground zero for the next big water war in the West. What happens here on the Cache la Poudre is likely to foreshadow the fate of the many endangered rivers throughout the Intermountain West.

The Poudre is a medium-sized river for the arid West, with an average flow of 300,000 acre-feet per year. As it flows through Fort Collins and onto the plains, about 60 percent of its water has already been sucked out through a massive network of over two dozen ditches, dikes, and dams – 85 percent of that for farms, 15 percent for cities. Here where I live, in downtown Fort Collins, eight miles downstream from the mouth of the last canyon, the river is sometimes drained completely dry – *bone dry*. (To see more photos of the dead Poudre, visit EndangeredPoudre.org.) By the time the river reaches its confluence with the South Platte, about fifty river-miles to the east, its flow has been almost completely diverted; and even worse, the water that is left in the river is polluted by wastewater plants from Fort Collins and Greeley, and by intense agricultural runoff. This once majestic "Wild and Scenic River" has been turned into a muddy, stinking ditch by journey's end.

The folks that want to further dam and destroy our river say that the lower Poudre is a "working river," and that it has to be worked even harder to

This majestic "Wild and Scenic River" has been turned into a muddy, stinking ditch by journey's end.

SAVE THE POUDRE

The Poudre River is sometimes drained completely dry, as in this photo taken in winter just a mile northwest of downtown Fort Collins.

serve future populations. We say the Poudre has already been worked to death, and we're determined to keep what's left of it alive and begin the even harder work of restoration.

This story would have a nice good-versus-evil spin to it—natural ecological health against the usual portions of human greed and illegality—if it weren't for one major factor: Most of what's being done to the Poudre *isn't* illegal. The law runs against the river. Water in Colorado, and throughout much of the Southwest, is a legally owned commodity—not a public resource like forests, open space, and wildlife—and almost every drop of water is owned by some entity that has a legal right to use it. This policy, called "beneficial use," stipulates that all water must be used for financial benefit. And further, anyone who owns river water and lets it flow by without using it for financial benefit can lose the right to the water, and someone else can legally take it.

The main impetus for these laws started in the early days of the West's settlement, when water was used in gold and silver mining and for agriculture. Very few people were using Colorado water for pleasure or aesthetic appreciation, and nobody was thinking about the ecological devastation of rivers. So the law stipulated that rights to all the tens of millions of acre-feet of water that flows off Colorado's spectacular snow-capped mountains should be owned and used, and bought and sold like corn and silver on open markets. "Water brokers" and land developers routinely make tens-of-millions of dollars as Colorado's rivers—including our Cache la Poudre—are drained dry for cheap water, fast profit and rapid population growth.

This law has changed little over the years, but the West's frontier ethic and the culture it spawned has changed dramatically. Many people in the West now place great value on the ecological integrity of the region's river systems, and derive great pleasure from their rivers. There is also considerable economic benefit tied to that enjoyment. We increasingly recognize that our own well-being is deeply connected to the well-being of the rivers themselves and the myriad species and ecological processes in and around them. We paddle these rivers, build bike paths beside them, fish and wade in them, photograph them, ponder along their banks, or simply watch them.

Yet while the threats to the Poudre continue to grow, so do hope and activism and know-how to save the Poudre. There are many new agricultural-irrigation technologies that could save one-third to one-half of the water that is currently used in crop production. And new developments in crop rotation and dry land harvesting and other farming methods could also save water. Residential water use could also be curtailed without the loss of amenities. Drought-resistant landscaping for suburban homes is increasingly available, and myriad low-water residential-irrigation technologies are on the market. Indoor water use could be curtailed with various low-water appliances. In recent years, as more people speak out against water waste, some Colorado leaders have begun to embrace these new landscape aesthetics and technologies, and are beginning to promote government policies and incentive programs that reward water conservation.

Still, it all comes back to money. The dam-and-diversion projects on the Poudre have just begun to be scrutinized from an economic standpoint. Money can be spent either to develop more storage through dams and reservoirs—in our case, over a billion dollars worth—or through water-conservation rewards and programs, and other related lower-cost alternatives. During the big Western drought of 2002-2003, for example, Fort Collins' municipal government spent $200,000 on a marketing campaign promoting residential water conservation, and the public responded by cutting water use by ten percent. That ten percent amounted to 3,000 acre-feet of water, when one acre-foot was selling for $17,000. That amounts to $51 million worth of water saved by a $200,000 public expenditure—a pretty spectacular return on investment in anyone's book.

Moreover, given the distressed state of the national economy, the State of Colorado and municipalities that want to drain, divert and destroy the Poudre are being forced to re-examine the finances of these projects. Most of the cities and towns (and the developers on their boards and councils) that covet the Poudre's water had hoped to pay for these billion-dollar dams with debt—borrowing the

money, then paying it back by charging the cost to new housing growth. But this growth has stalled.

All of these projects are also subject to environmental impact reviews, involving the National Environmental Policy Act, the Clean Water Act, and the Endangered Species Act, all of which allow for alternative economic analyses to be entered on the public record. The Save The Poudre Coalition has developed an alternative water-supply-and-storage proposal, called the "Healthy Rivers Alternative," that offers towns a way to get the water they need without threatening the lives of rivers or burying northern Colorado in debt. Our alternative proposal is also cheaper and better suits the financial needs of farmers.

Forward-thinking legal efforts are also in the works, such as a new state law in 2009 that will give tax credits to people who own water if they transfer that water back to a river for public ownership. In several counties around the state, small amounts of water have been returned to rivers for fishing, whitewater rafting and kayaking—activities that can be shown to provide financial benefits to surrounding communities and thus legal "beneficial use" of the water. Furthermore, groups around Colorado are starting to create "water trusts"—similar to land trusts—that buy water and keep it in the river for its own health and the people's enjoyment.

A hopeful balance is developing: For every threat posed by the moneyed river-destroyers, there has been an equal and opposite outpouring of love, passion and spirit to keep the Poudre River alive. For example, through the environmental review process, nearly 50 highly trained scientists and lawyers, many of them volunteers, have read thousands of pages of technical reports to help us analyze threats and alternatives. And hundreds of citizens have provided individual comments in the Environmental Impact Statement and have shown up at public events to support the river. Sixteen national, statewide and regional conservation groups, with more than three million members, have joined as "partners" of the Save the Poudre Coalition.

It's true—our love, passion and spirit haven't brought us victory yet. But when we use these inner resources to study the law, to engage the science, and ultimately, to learn about how money kills rivers, we can change the ways that money works. We can, we believe, make water flow downhill, the natural way, to remain where nature placed it, in the magnificent rivers of the American West including our Cache la Poudre. **W**

JOHN BARTHOLOW

On a misty spring morning, the Poudre conjures up nature's wildness as it flows through Fort Collins.

Below: Although the Poudre is Colorado's only "Wild and Scenic River," it is also easily accessible to local residents. In Poudre Canyon, 10 miles northwest of Fort Collins, a family plays by the river.

SAVE THE POUDRE

For every threat posed by the river-destroyers, there has been an equal and opposite outpouring of love, passion and spirit to keep the Poudre River alive.

A River Runs Through Him

A solo trip on the endangered Apalachicola River as much about the journey as the destination.

By Earl Morrogh

PHOTOS BY EARL MORROGH

Stretching more than 100 miles from the Georgia border to the Gulf of Mexico, the Apalachicola is Florida's largest river as measured in volumetric flow.

Opposite page: Earl Morrogh's "RiverTrek" linked his advocacy for protecting the river with his ambition to experience it solo.

Earl Morrogh is a writer, photographer, environmentalist and instructional designer. He serves on the board of directors of Apalachicola Riverkeeper.

Although October mornings in northwest Florida are typically cool and dry, this day had dawned warm and moist. Heavy fog obscured the opposite bank of the Apalachicola River as I slipped into the cockpit of my kayak a few hundred feet downstream from the old Victory Bridge in Chattahoochee. My wife, Judye McCalman, the sole witness to this launching, wished me "Bon voyage!" and I back-paddled away from shore, reversed direction, and turned southward into the main channel of the river. I had embarked on "RiverTrek," a solo journey to raise funds for the Apalachicola Riverkeeper.

Formed by the confluence of the Flint and Chattahoochee Rivers, the Apalachicola is the largest river in Florida as measured in volumetric flow. From the Georgia-Florida border, it charges through the high bluffs of the Grand Ridge and the Cody Scarp, geographic features that stand above the relative flatness of the coastal plain, and were built and sculpted over thousands of years by the actions of river and sea. From there, the river meanders to the Gulf Coastal Lowlands and discharges into Apalachicola Bay. My destination was the historic port town of Apalachicola, Florida, situated at the mouth of the river—five days and 107 miles down stream.

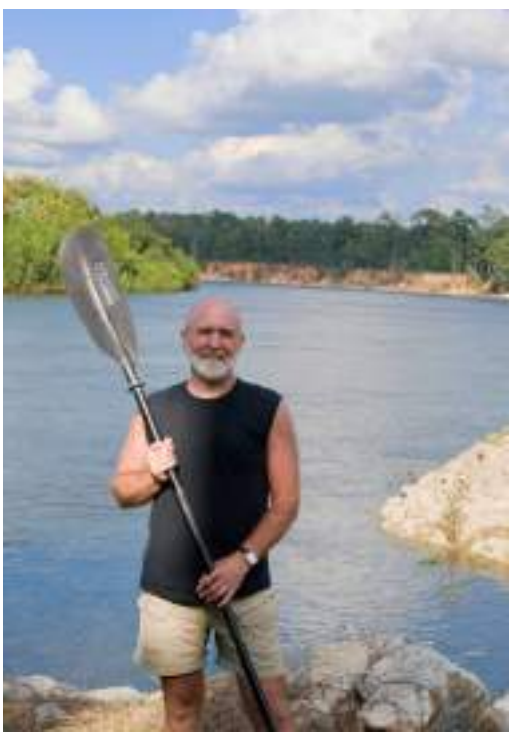
I had just turned 60. For decades I have paddled kayaks to escape the soul-numbing drone of modern life and immerse myself in natural environments. Early-age forays into the bayous, bald-cypress swamps, and marshes of Louisiana's vast Atchafalaya Basin nurtured in me a sense of humanity's niche in the great scheme of life. I came to understand that, in the natural world, I was no more or less significant than any other creature, plant, or rock. This overwhelmingly

impersonal fact of nature helped me realize my place. But it is easy to forget those early lessons, so I return to the wild periodically to refresh my memory and restore my spirit.

This was the third time I had paddled the length of the Apalachicola. The first was in October 2007, when I participated in a seven-day group kayaking trip sponsored by the Apalachicola Riverkeeper. That leisurely journey was attended by a powerboat to carry food and gear, and featured daily educational presentations by experts and stakeholders in the Apalachicola River Basin: scientists, activists, commercial fisherman, and timber men.

The presentations emphasized that the relatively undeveloped Apalachicola River Basin plays a major supporting role in a billion-dollar offshore seafood industry in the Gulf of Mexico. It produces over 90 percent of Florida's oyster harvest and 13 percent of the nation's. The river and its surrounding forests, prairies, and coastal habitats are recognized by the Nature Conservancy as one of six "biodiversity hotspots" in the United States, supporting more than 1,500 species of native plants and animals, many of which exist only in that region. This system has the highest species diversity of reptiles and amphibians in the United States and Canada, with more than 40 species of amphibians and 80 species of reptiles. In addition, the Apalachicola National Forest, which borders the river, is one of the largest contiguous blocks of public land east of the Mississippi River. I had often heard the Apalachicola River characterized as "a great American treasure," but, until that paddling trip, I hadn't fully understood why.

Apalachicola Bay, moreover, is recognized as an exceptionally valuable and rare estuarine system and has received numerous protective designations (among them, an Outstanding Florida Water and a Florida Aquatic Preserve by the Florida Department of Environmental Protection, a National Estuarine Research Reserve by NOAA, and a Man in the Biosphere Reserve by UNESCO). I was alarmed, however, to learn about the degradation of the river basin. Over the past 50 years, erosion of the river channel and decreased flow from upstream have caused significant declines in river water levels, which in turn have led to drier conditions in wetland habitats of the adjacent river floodplain. Far less water now moves into the hundreds of miles of floodplain streams, sloughs, and lakes that are essential to maintaining healthy populations of fish, mussels, and other aquatic life.



Calm, beautiful, brimming with life, the Apalachicola is threatened nonetheless by declining water flow.

In a well-regarded 2006 report on water-level decline in the Apalachicola River, Helen Light, a scientist who has worked at the U.S. Geological Survey office in Tallahassee since 1979, observed, "Unfortunately, the largest drop in water levels has occurred during spring and summer, which is the most critical time of year for fish reproduction, wetland tree growth, and many other important biological processes." Light went on to point out that, although previous studies posited that declines caused by channel widening and deepening were limited primarily to the upper 30 miles of the river, "we now know that nearly the entire 86 miles of the non-tidal Apalachicola River and floodplain have been substantially altered by water-level declines caused by channel erosion."

Although channel erosion caused by the construction of Jim Woodruff Dam in 1957 stabilized after the 1970s, spring and summer water levels have continued to decline in recent decades because of decreased flow from the upstream watershed. According to Light, the likely causes are climatic changes, reservoir evaporation, and a variety of human activities in the Apalachicola-Chattahoochee-Flint River Basin (ACF), including agricultural irrigation, municipal water use, and flow regulation. A series of droughts in the 1980s combined with the growing water demands of large-scale agribusiness and metropolitan Atlanta made it obvious to all stakeholders that the ACF's limits were being tested.

A water-rights dispute soon erupted. Holding water in reservoirs to quench Atlanta's thirst would mean less water for hydropower generation downstream and an interruption of the natural flow regime that is essential to the Apalachicola River and Bay ecosystems. Withdrawing more groundwater for agricultural irrigation in the Flint basin would exacerbate the problem. By the late 1980s, the states of Florida and Alabama and the Army Corps of Engineers had become embroiled in litigation challenging Georgia's efforts to impound and divert more water, and this ACF "water war" remains unresolved. The Apalachicola Riverkeeper has been a strong and persistent voice in this dispute, advocating for ecologically and economically equitable allocation of the freshwater in the ACF system.

Learning about the uniqueness and richness of the Apalachicola River Basin and the growing threat to its ecological stability made a deep impression on me. However, it was getting to know the river one stroke at a time that ultimately moved me to become more involved in the Riverkeeper's mission to provide stewardship and advocacy for the protection of the Apalachicola River and Bay. The group trips down the Apalachicola that Riverkeeper sponsored were based on the premise that to know the river is to love the river, and loving the river leads to wanting to preserve its treasure. I am proof that their premise is valid. Earlier in 2008 I was elected to the board of directors of the Apalachicola Riverkeeper and became actively involved in promoting the organization and its mission. During my second, seven-day, group trip down the river in October of that year, I considered the challenge of paddling it alone. By the end of the trip, I was confident I could do it. By year's end, we had conceived the idea of seeking fundraising sponsors for my trip, and called it "RiverTrek."

RiverTrek logically linked my advocacy for protecting the river and my personal ambition to experience it solo. A promotional website featured a video advocating the benefits and pleasures of paddling the Apalachicola River. We invited my family members, friends, and colleagues to sponsor me on a per-mile, per-day, or five-day basis, in support of the Apalachicola Riverkeeper's mission. A tracking map allowed anyone to follow my progress down the river. My GPS coordinates were updated every 10-to-15 minutes on the Google map by a SPOT tracking device strapped to my kayak, and two green LCD lights blinking in unison assured me that the tracker was successfully signaling my location as I paddled downriver and into the thick mist.

I not only had never paddled the river solo before, but neither had I completed the trip in five days. Based on my average still-water paddling speed of three miles per hour and a calculated one–mile-per-hour boost from the river, I estimated that each 21-mile leg of the trip would take six-to-eight hours, including rest stops, lunch breaks, and time to explore tributaries and observe wildlife.

What I had not anticipated were the record-breaking heat and humidity levels that were my

Top: The river basin supports more than 1,500 species of plants and animals.

Bottom: Record-breaking heat and humidity made Morrogh's journey even more of a challenge.

constant companions on my journey. Heat indexes above 100 degrees each day determined when I would paddle and at what pace. To avoid the most oppressive heat of the day, I arose at 6:00 a.m., and, after a quick breakfast, broke camp, packed my gear, and, as soon as I was able to discern the far bank of the river, began a "sprint" of five to five-and-a-half hours, arriving at my destination between 1:00 and 1:30 p.m. Fortunately, I had conditioned my upper body well and endured the physical exertion without too much discomfort. Unfortunately, my plans for a more leisurely excursion were derailed.

Paddling at daybreak offered unexpected benefits. As the morning sky brightened, the abundant wildlife began to stir, and I became a quiet and grateful witness to their morning rituals—kingfisher, bald eagle and osprey swooping down on unsuspecting fish near the river's surface; buck, doe and fawn drinking at the river's edge; mullet leaping; bass loudly feeding on minnows and aquatic insects under low-lying bushes extending from the river's banks, while a vigilant mother alligator guarded her brood. In spite of my compressed schedule, I often laid my paddle across the cockpit to watch and listen.

As I continued to paddle, the peace and pace of the natural world gradually displaced the incessant bang and buzz of modern life. As during previous multi-day journeys, my relationship to the river slowly changed from a superficial to a deeply intimate level. By the third day, my breath, heartbeat, and paddle stroke felt completely synchronized with the rhythms of the river.

Hour after fluid hour, I steadily powered my little craft toward each day's destination and finally into the safe harbor of the town of Apalachicola. In my clear and calm state of mind, I thought of all the people who had sponsored me and hoped they, too, would take the time to learn about the cause and organization their donations supported. I hoped they would value the Apalachicola River Basin as I did and also have the opportunity to learn about the basin more intimately some day.

As a fundraising event for the Apalachicola Riverkeeper, RiverTrek was a success and a replicable model for the future. On a personal level, the journey satisfied my desire to break out of the habitual work and social patterns of day-to-day life and reconnect to the natural world. I feel fortunate that my decision to paddle alone at age 60 down a major American river was rewarded by a trip without incident or injury, a victory in my own little battle for the Apalachicola River Basin. Many battles remain, however, to protect and preserve this spectacular natural resource, this great American treasure. **W**

RiverTrek met its fundraising goal but the fight for enough freshwater to ensure the Apalachicola's survival continues.

Seeing the Whole River

Dividing a river into parts, claiming it for economic use and ignoring its natural community, we lose sight of the river itself.

By James G. Blaine

Rivers around the world no longer run regularly to the sea. The Colorado stopped doing so in 1960, and China's Yellow River runs dry for two thirds of the year. More than half the world's rivers are seriously depleted and polluted. The Ganges is befouled almost from its source, while the Volga annually transports 42 million tons of toxic waste to the Caspian Sea.

Despite all humankind's spectacular engineering feats, over a billion people around the world lack access to safe drinking water—and three times that number suffer from inadequate sanitation. Diarrhea kills an estimated 2.6 million people each year, the majority of them infants and children. Two hundred million people suffer from schistosomiasis, an infection caused by drinking contaminated river water, and more than six million Africans have river blindness.

In place of the multi-faceted relationships people historically had with rivers, we have substituted a single determinant of their value: What can this river do for me? In our drive for economic growth, we have bent rivers to the human will. Across the globe there are now more than 50,000 large dams, which collectively have displaced 40 to 80 million people. From Louisiana's Atchafalaya River to China's Yangtze, we continue to impose ever-bigger engineering solutions on natural wonders we do not understand and have ceased to care much about. Nor are we safe from these solutions: In 1975 a dam in China collapsed and as many as 230,000 people died.

Rivers have provided us immeasurable benefits. But we are destroying them, and in doing so, we are imperiling our future. We need to step back from the brink and reconnect with our rivers. We need to understand them, not simply try to control them—to appreciate the whole of a river, not just those parts we find useful, to realize that a river is not merely a channel through which we can push water and waste, but a natural system of which we are a part. We urgently need to awaken to the beauty of our rivers, and to see clearly the forces that threaten them.

Landscape (Chao Phraya River, Thailand), watercolor, 7"x10", 2008

Sarah Sutro is a painter and poet. She has recently returned to the United States after living in Thailand and Bangladesh for several years. Like James Blaine's words, her paintings make us consider the river in new ways.

Bangkok Landscape, watercolor, 7"x11," 2009

Rivers in History

Streams and rivers provide the essentials of life—water and food. For humans they have done much more. We have used rivers to bathe our bodies, wash our clothes and remove our waste. Rivers have irrigated our farmlands, and carried in their waters the fertile sediments that create and replenish the soil itself. Rivers have made possible the inexpensive and efficient transportation of goods—and thus the social, cultural and intellectual exchanges that have spurred the development of ideas and the spread of knowledge. Harnessing the flow and capturing the power of rivers was the source of the Industrial Revolution and the modern world as we know it.

The earliest civilizations grew on rich alluvial plains that rivers created, and to a great extent rivers defined those early communities. People venerated their rivers as the source of life. Their earliest gods were river gods. But rivers could also be arbitrary forces of destruction, and people were often at their mercy, as floods obliterated their homes, droughts withered their crops, and contaminants poisoned their water. The river brought death as well as life.

Over time, people learned a great deal about stream and river ecosystems by dividing knowledge into distinct disciplines. In recent years, however, despite all we have gained through specialization, we have lost sight of the river itself. To see

it again in its wholeness, we must learn to weave the separate threads of knowledge and experience into a single tapestry, honoring the uniqueness of each thread and understanding how together they constitute the whole river.

Let us look at three threads: science, utility, beauty.

By observing the specific and often microscopic features of a river, scientists have sought to know it directly and tangibly. Particularly over the past 60 years, scientific research has vastly expanded our understanding of rivers and their ecosystems—their hydrology and chemistry, their physical properties and biological communities. Yet perhaps the most profound result of this work has been to demonstrate empirically what people understood intuitively for millennia—that a stream is a dynamic system whose equilibrium depends on constant change, that it does not flow in a vacuum but is an integral part of the landscape it drains, that what happens throughout a river's watershed determines the health of the stream, and that upstream activities determine downstream health. No part of the river's ecosystem—not even a single organism—can be completely understood except in its relation to everything else.

Human activity is the single greatest threat to the rivers we depend on. To understand the whole river is to account, in full measure, for the manifold benefits that rivers provide humans, and the true costs of doing so. Our dependence on rivers is not going to change. We cannot stop drinking their waters, nor eating the food they provide. We will continue to demand the power they generate, the transportation they make possible and the recreation they support. But we must stop reducing streams and rivers to their utilitarian functions and calculating their value solely in economic terms. It is both an environmental and an economic imperative to restore their place in the natural world so that they can both regenerate themselves and continue to provide their unique array of benefits and resources.

The third dimension of the whole river is the one we have most thoroughly forgotten. That is to honor the river's natural mystery and beauty, which lie beyond the reach of scientific investigation and are too often the victims of economic exploitation. As with science, beauty is rooted in the particular—the play of light on the water, the caddisfly in its tiny case, the murmur of water flowing over stones, the scent of riparian plants in the early spring. It leads us to enjoy the stream directly, as we walk along its banks, raft into its reaches and fish its pools, feeling at these moments the solace of solitude and the paradoxical sense that we are not alone. We learn from these experiences that a stream is not just a collection of resources for us to exploit, but a community of which we are members. Beauty pulls us out of our individual selves and joins us with a world of immeasurable—and infinitesimal—things.

Science. Utility. Beauty. These are the building blocks of a vision of the Whole River. We need science to understand the structure of freshwater ecosystems, how they function in their natural states, and how human activity affects them. We need to be clear about the benefits we derive from streams and rivers and about the costs of these services. And we must reach beyond

scientific data and economic value to allow our rivers to carry us on currents of wonder and connect us to the cosmos.

The Tragedy of the Commons Revisited

There is no clear and widely accepted set of rules governing the control, use and stewardship of flowing water. In the United States, for example, nobody owns the rivers. Legally, all navigable waterways belong to the public, held in trust by governments for the benefit of all. Yet the nation's history, particularly in the West, reveals endless and frequently violent conflicts over water rights, and all too often the fact that rivers are not owned by anyone means that no one takes responsibility for them. They have become the classic manifestation of what ecologist and author Garrett Hardin called "the tragedy of the commons."

Hardin described two uses of the commons: "a food basket," from which people take things they need, and "a cesspool," into which people put things they don't want. Rivers have long been both. People take what they need from rivers and flush back into them what they do not want. But they do not stop there: They actually take the commons itself—as they remove in ever-increasing quantities the river's water.

Because the evidence of stream and river pollution is often either buried in sediment or exported downstream, and because private water interests have wielded such enormous clout in this country, it has proved difficult for governments to assign responsibility and to enforce remediation. This is not simply a legal matter; it is a testament to ignorance. The misuse of rivers represents a profound misunderstanding of how they work—for they are far more than transport systems for waste. They are homes to communities of tiny organisms that perform the gargantuan work of breaking down and recycling that waste. Rivers, if we treat them with care, will, in fact, clean their own waters, and they will do so free of charge. If we continue to overload them with pollutants, however, we will kill them.

This is particularly true of small streams, which are a river's life blood, the cradle of its biodiversity, and the home of billions of species that are the source of its energy. They are the places where land and water interact most closely and, because they are especially vulnerable to changes in land use, they are the key to a river's health—and to the health of the human settlements that depend on the river. Yet, these small, often intermittent, streams, which make up 80 percent of most river systems, are the most neglected and least protected parts of the river's ecosystem. And the human victims of that neglect are disproportionately the most vulnerable and least visible members of society.

Because all living things depend on clean fresh water, its distribution must be grounded in equity. Nobody can own the water, just as nobody can own the air; its benefits must flow to all people. While this is a matter of simple justice, implementing it is anything but simple in a world of unending and competing demands for resources. Any distribution system, moreover, must ensure

Water II, (Phnom Penh, Cambodia), watercolor, 7"x11," 2009

the health of all living things, for it is neither ethical nor wise—nor, in the end, possible—to appropriate water for human use without regard for the environment that supports us all.

In the 1972 article "Should Trees Have Standing?" Christopher Stone argued that nature is not made up of "objects for man to conquer and use," but is a subject with legal rights. His thesis was both a call to give nature standing in courts of law and a demand that we transform the relationship between humans and ecosystems from one of domination and exploitation to one of interdependence and community.

In our focus on what rivers can do for us, we have ceased to consider what we must do for them. In the name of progress, we have auctioned off the commons to those who would most aggressively exploit its resources. We have lost sight of the reality that a river can only belong to all of us when it belongs to none of us.

Just as Aldo Leopold urged 60 years ago that we "think like a mountain," the time has come to think like a river—to understand that a river and its watershed is a natural community of which each of us is a member, a community that is crucial to our physical survival and to our yearning for transcendence, a community that we must learn to nurture once again so that it will continue to nurture us. **W**

James G. Blaine is a writer and teacher and a senior staff member at the Stroud Water Research Center in Chester County, PA.

CALL TO ACTION

By Janelle Robbins, Staff Scientist

From Florida to the Rocky Mountain states to the Tibetan Plateau, water resources are declining in quality and quantity across the world. Water scarcity will be one of the most urgent issues of the 21st century. According to the United Nations, by 2025, 1.8 billion people worldwide will be living without enough water to meet their daily needs, and two out of three individuals will be living in water-stressed conditions. You can make a difference today by conserving water. Use the following tips to act. Every drop counts!

STATE AND FEDERAL ACTION

Call and write your legislators elected officials to demand federal and state water efficiency standards. In the U.S., you can track water efficiency bills at www.allianceforwaterefficiency.org and use www.congress.org to find your elected officials.

LOCAL MOTION

Get involved with your municipal planning, zoning and action boards to advocate for water conservation incentives and sustainable sources of water for your community; for ideas and tools check out www.waterwise.org.

Insist that your drinking water supplier provide your community with legally required, detailed and accurate right-to-know reports about the quality of your drinking water; for more information go to www.crtk.org/drinkingwater.cfm.

INDIVIDUAL RESPONSIBILITY

Stop leaky faucets, pipes and toilets that can waste thousands of gallons of water each year; visit www.awwa.org/awwa/waterwiser/dripcalc.cfm to estimate how much water you're wasting and www.lcra.org/water/utilities/waterleak.html to find out how to fix it.

Conserve water; check out www.epa.gov/watersense to find a list of certified water- and money- saving products.

Join your local Waterkeeper program at **www.waterkeeper.org.**

Plant native grasses, perennials, shrubs and trees to reduce the need for water-wasting irrigation; go to www.wildflower.org to find what's right for your location.

PROTECT THE PLAYGROUND

THE RIVA & DALEA

WATERKEEPER® ALLIANCE

Teva is proud to support Waterkeeper Alliance in their mission to champion strong communities through clean water.

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Harbor School students in a marine technology class aboard the 125-foot sailing ship Lettie G. Howard, a 100-year old fishing schooner that serves as one of the school's floating classrooms.

Reading, Writing— and Maritime Studies— in the Middle of New York Harbor

The Waterkeeper-inspired **Urban Assembly New York Harbor School** is creating a new kind of classroom and the next generation of environmental activists.

By Murray L. Fisher

ALL PHOTOS BY TIZOC GOMEZ, UA NEW YORK HARBOR SCHOOL EXCEPT WHERE NOTED

When the Urban Assembly New York Harbor School opened in 2003, in a dilapidated public high school building in the Bushwick section of Brooklyn, our dream was to turn the 600 miles of New York City's coastline and all the water surrounding it into a classroom—one in which inner-city kids, most of whom were at risk of not graduating from high school, would learn to sail, calculate, row, experiment, build, swim, and navigate. Not incidentally, they would also become better readers and writers, and would graduate.

But our location deep in Brooklyn was more than an hour's ride by public transportation from the waters our students were being educated to manage and protect. We desperately needed a home on the water. Now, after six years of tireless advocacy and dozens of proposals, our dream has been realized—and then some.

Next year, the Harbor School will open its doors on Governors Island, a 172-acre jewel that sits in New York Bay between Lower Manhattan and Brooklyn. We will be the first inhabitants of this island since the Coast Guard left in 1995. And we'll be the first non-military residents since the Lenape Indians occupied it in the 17th century as a summer encampment where they fished and gathered nuts.

Our classroom building, built as a military barrack, is being renovated by the New York City School Construction Authority at a cost of $30 million. In addition, we are working to raise more than $3 million to transform one of the island's former Coast Guard facilities into a Marine Science and Technology Center, where our students will maintain, dock and launch small boats and learn to build traditional wooden boats. It will also house a SCUBA Diving program, and will contain an oyster hatchery, which will allow the students, along with our partner, the New York/New Jersey Baykeeper, to play a pivotal role in restoring oysters to the harbor.

In our new home, finally, classroom and environment will be one.

This transition to a new facility in the heart of the harbor seems like an opportune moment to reflect on the original vision for the school, which had its source in my experiences with Hudson Riverkeeper and Waterkeeper Alliance.

I grew up in a family that taught me a deep appreciation for the natural world. As a boy, if I wasn't at school or playing sports, I was exploring

Above, Harbor School students learn to kayak on the Hudson River.

Left, Students unfurl the Lettie's sail on a week-long trip to Portland, Maine, during the school's annual Summer of Sail.

RENDERINGS BY JOHN GIARDULLO ARCHITECTS

Above, Artist's rendering of the oyster hatchery in the Harbor School's future Marine Science and Technology Center (MAST) on Governors Island. Right, Science teacher Roy Arezzo and student Maurice Warren collect marine specimens on Coney Island beach.

creeks, fishing with my father, hunting with my uncles, gardening with my mother, or planting and growing trees with my grandmother.

I became more and more aware that the resources of this planet aren't infinite, expendable commodities to be consumed and disposed of at will, but precious, indispensable, often fragile parts of a vast interdependent network of life forms that must be preserved, protected and restored. So I decided that I wanted to work in the environmental field. That led me to attend Vanderbilt University with the goal of becoming a wildlife biologist.

A couple of years of lackluster academic grades led me to a second epiphany—one crucial to my role in founding the Harbor School: The more education is grounded in real life and actual experience, the more relevant and vital it is. Realizing this, I took a year off to work with wildlife biologists in the jungles of Peru and Bolivia, where I learned that I was especially interested in the policy side of environmentalism.

Returning to finish my studies at Vanderbilt, I came to a third realization when I read *The Riverkeepers: Two Activists Fight to Reclaim Our Environment as a Basic Human Right*, by Robert Kennedy Jr. and John Cronin. For me this instantly became seminal text, mission statement and vocational manifesto. Their model of ecosystem protection and community development inspired me. For the first time, someone had articulated my own all-encompassing environmental ethic.

When I visited Riverkeeper during my spring break to find out more about the organization, I quickly discovered that the eloquent call-to-action in the pages of *Riverkeepers* was matched by a real-life determination to build a global movement for environmental stewardship from the ground up, community by community—no matter how long it took.

Not only was I inspired, I was lucky. I was hired through the AmeriCorps program as an intern at Riverkeeper, and learned more about the world in the following year than I had in four years of college. During the day I was a jack-of-all trades in the five-person Riverkeeper office in Garrison, New York. One day I'd speak to elementary-school students about the Hudson River. Another day, I'd work on a museum exhibition about the river's history. A third day, I'd tag shad with Department of Environmental Conservation scientists, or assist a Riverkeeper attorney in a lawsuit against a power plant, or interview a former commercial fisherman about the Hudson's fishing history.

I remember thinking to myself, "This is what school should be like." And the more I pondered this, the more obvious it became to me that educating the next generation in the ways of environmental activism involved a two-fold challenge: first, to open the eyes of the young to the necessity, beauty and fragility of the water resources that surround and sustain them; second, to train them to translate beliefs into action by developing the full breadth of skills necessary for community leadership. To me, this seemed like the ideal education.

After a year with Riverkeeper, I was hired as the first field coordinator at Waterkeeper Alliance, which had just been created out of a loosely

Ninth-grade students at the Harbor School, many of whom had never been on the water before, learn to work together by raising the Lettie's sail.

affiliated group called the Alliance of River, Sound and Bay Keepers. The new group had just two employees, and my responsibilities were varied: fundraising, marketing, office administration, but all directed toward building this burgeoning movement into a formal group of affiliated members. Over three years, I was privileged to help 60 new Waterkeepers join the movement.

I also watched many of the Waterkeepers with whom I worked develop into impressive community leaders and passionate spokespeople for the environment. There was the former shrimper who became one of Georgia's most effective environmentalists, and the pool-cleaner who became a leading environmental advocate in California through his work at Santa Monica Baykeeper. Again and again, I saw the most valuable skills of grassroots environmental leadership develop out of deep affection for local water resources and determination to do what was necessary to ensure their long-term health. Once more I thought to myself, this work should be organized into an actual school.

In the summer of 2002, several factors came together to lead me from abstraction into action and to propose a maritime high school modeled on Waterkeeper programs and philosophy. The Alliance was considering establishing a Waterkeeper Academy—a "boot camp"—where new Waterkeepers would be trained. I proposed that this be situated in New York City, at the mouth of the Hudson, where the movement began, and that it also include a high school established on the Waterkeeper model. The city's new mayor, Michael Bloomberg, was making a strong effort to reform the city's badly broken public-school system, which was graduating only 38 percent of its minority students on time. These developments coincided with my desire to work at the local level where I could get to know a single body of water and its surrounding community. It was fortunate and crucial to my fulfilling this wish that I was introduced to Richard Kahan, a developer and social reformer in New York City who had started a small, experimental school in the Bronx and was considering starting a second. He embraced the idea of a "Waterkeeper school" and quickly committed to becoming the co-founder. His guidance was invaluable for navigating the bureaucratic and political waters, and he helped greatly in developing the school's educa-

CARTER CRAFT

A Harbor School sailing class on the East River, with Lower Manhattan's financial district in the background.

tional model and forming necessary partnerships.

Waterkeeper Alliance and Richard Kahan's nonprofit group, the Urban Assembly, were joined as founding partners by New York's South Street Seaport Museum. Although we had no idea where our maritime public high school would be located, we submitted a proposal for a planning grant to New Visions for Public Schools and the New York City Department of Education. In November 2002 we were awarded a grant of $10,000, and I began in earnest to lead the process of creating our school.

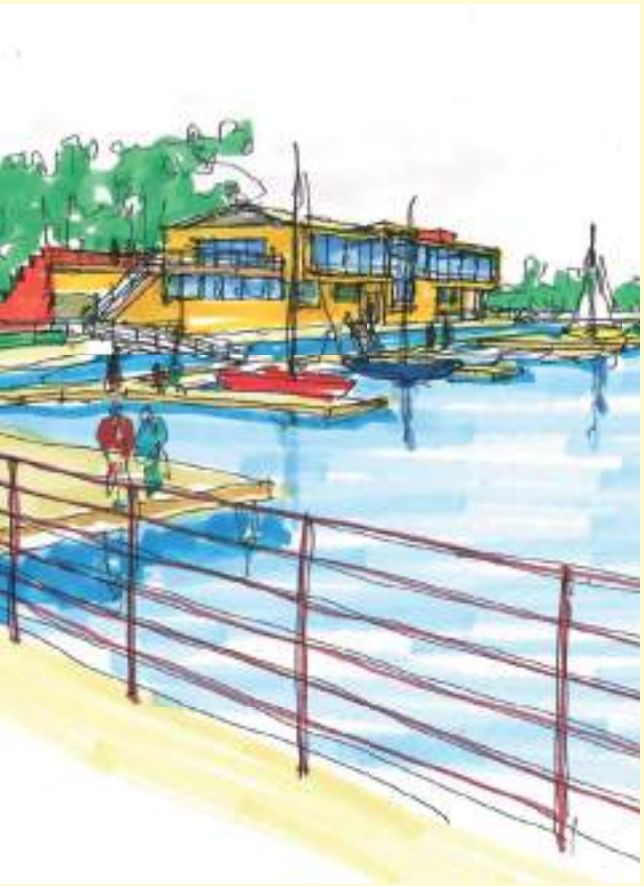
After months of searching, I found a principal, Nate Dudley (who still leads our school after nearly seven years), a teacher, Roy Arezzo, and a variety of parents, partners and current New York City high school students to serve on our planning team. We wrote the proposal together, and in April of 2003 we were awarded a four-year, $500,000 grant from the Gates Foundation, the Open Society Institute, and the Carnegie Foundation.

Time was extremely short. We had four months to secure space, equipment and materials, hire eight teachers, recruit 125 students who hadn't been accepted at other schools, and develop a curriculum. Somehow we managed to get it all done.

Six years later, I marvel when I look back at how far we've come. In a neighborhood plagued by poor schools and truancy, the Harbor School now has an 86 percent attendance rate and a four percent drop-out rate among its 400 students. Students at the Harbor School study the core subjects necessary for a New York State Regents diploma in an interdisciplinary environment in which the maritime theme links all of the subjects. While preparing students for college, we also offer Career and Technical Education courses that prepare them for careers working on, around, in, or on behalf of water. Three "Programs of Study"—Marine Science, Marine Technology and Marine Policy—are modeled on the sets of skills a Waterkeeper must have to be successful. Every freshman takes an Introduction to New York Harbor class that visits 18 sites in the harbor throughout the year, spending a full day at each site surveying its natural and built environment—learning what lives in the water, and who works on the water. Sophomores enroll in a first-semester course called Introduction to Marine Technology, where they are taught the basics of seamanship, navigation, boat-building and -design, marine communication and weather. This is followed by Introduction to Marine Science in the second semester.

At the end of their second year, students choose whether to concentrate in Marine Science, Marine Technology, Marine Policy or SCUBA Diving. Each concentration includes two sequential courses during the junior year (e.g. Marine Tech I and Marine Tech II), followed by a senior-year internship in a related field such as shipping, oceanography, botany, marine biology, waterfront development, sewage-and-water treatment, environmental law, environment engineering, or hydrology.

Every Harbor School student learns to swim



Above, In the Marine Technology lab in the new MAST Center, students will learn the craft of boat building.

Left, a view of the center from one of the new docks.

and takes a basic swimming test. And we're the only New York City public school with sailing and rowing teams, and scuba-diving and water-polo clubs. (Our rowing team goes to Boston every year for the U.S. Youth Open Water Rowing Championships, and has come back with the trophy twice.)

Although 80 percent of our predominantly Latino and African-American students live below the poverty level, and 70 percent are below grade level in math and reading when they enter, graduation rates and college acceptances are well above the citywide averages. Our recent graduating classes received scholarships valued at over $2 million to dozens of schools, including College of the Atlantic, Skidmore, Ithaca College, State University of New York Maritime College and SUNY Stony Brook. The class of 2008 graduated 75 percent on time compared with a previous Bushwick High School graduation rate of 22 percent. And 65 percent of those graduates are still in college. Our school just received an "A" on the New York City Department of Education's rigorous "Report Card."

About 20 percent of our students go on to maritime- or environment-related careers. We'd like to raise that number, but it is always thrilling to see our graduates, who once would not have conceived of such a career, find work on a boat, or study marine biology in college, or strive to become environmental lawyers—all because of their experience at the Harbor School.

But we still have a long way to go to meet our goals. If our students are to take even more pride in the work they are engaged in as young adults, that work must become, I believe, even more rooted in real-world experience. Presently, only about 20 percent of our curriculum is directly maritime- or environment-related. We are eager to take the next steps necessary to further fulfill the school's vision. We hope to mold our four-year curriculum to allow students to undertake the day-to-day activities of actual Waterkeepers: restoration projects, advocacy and legal research, letter writing, patrolling the harbor, investigating pollution, canvassing neighborhoods, organizing communities. I know from my conversations with Waterkeepers around the world that there is a critical need for young people with the skills necessary to protect and advocate for precious water resources.

We imagine each Waterkeeper organization's having an associated high school whose students and curriculum it guides. And we imagine these young people exploring every nook and cranny of that Waterkeeper's river, lake or estuary—the students' classroom—carrying cameras and notebooks. We imagine these same young experts visiting the offices of politicians, developers and community organizations and advocating for their body of water.

We hope that in our new home on Governors Island, we will have even more success erasing the line between academics and the real world, and that the Harbor School will lead the way in demonstrating what is possible when young adults, rather than being treated as liabilities to be marched from classroom to classroom, are treated as invaluable assets in helping to solve the world's problems.

Then we Waterkeepers-turned-educators will have done as much for the long-term preservation of the natural world as we have for the education of our young people. **W**

Murray L. Fisher is the co-founder and program director of the Urban Assembly New York Harbor School.

On The Water

J. Henry Fair

A new technology called hydraulic fracturing, or "fracking" is bringing to the surface gas deposits that were previously too deep to reach in the Marcellus Shale, which extends from southern New York to Pennsylvania, Ohio and West Virginia.

The fracking process uses millions of gallons of water per well annually, mixed with a cocktail of chemicals and pumped at high pressure down to the shale layer. The industry keeps the "recipe" secret, but many of the chemicals are known carcinogens. Some of this toxic slurry is pumped back up and into holding pits to evaporate, often spilling outside of the liner, threatening nearby surface and ground water.

This aerial photo shows an open waste pit of drilling slurry at a site in Dimock, Pennsylvania. The slurry also includes rock debris, drill bit lubricants, and possibly residual radioactive material. The overspray at the top is a violation and a danger to water bodies downhill.

In the images in his "Industrial Scars" series, photographer J. Henry Fair documents the unsustainable consumption of the earth's natural resources. His aim, he says, is to make the photos "beautiful and frightening simultaneously." You can view more of Fair's photographs on hydraulic fracturing at www.industrialscars.com/gasdrilling.

10th Anniversary Waterkeeper Alliance Conference in New York City Celebrates the Movement's Coming of Age

By Marc A. Yaggi, Director of Global Programs

Hundreds of members of Waterkeeper organizations from around the world gathered in June at the State University of New York Maritime College in New York City for Waterkeeper Alliance's annual conference, to take stock of the Waterkeeper movement and to be enlightened and inspired.

Guided by the theme "Clean Energy/Clean Water: Bringing It All Back Home" and focused on the effects of climate change on the world's water resources, the conference also celebrated the 10th anniversary of the Alliance's creation.

SUNY Maritime's waterfront campus provided the perfect setting for the classes, panel discussions, speeches and other presentations, as well as the informal networking among Waterkeepers for whom advancing the cause of clean-water advocacy in their watersheds can often seem like a lonely fight.

On Wednesday, wet weather forced the environmental-aviation groups LightHawk and SouthWings to cancel an afternoon of "aerial-advocacy training" flights—but they presented classroom lessons the following day. On day one, the grounded Waterkeepers attended a discussion of the Obama administration's water policy by the White House's Council on Environmental Quality Chief of Staff Jon Carson, which was followed by a picture show on environmental achievements in the Galapagos presented by Bill Reinert, National Manager of Advanced Technology for Toyota Motor Sales, USA, and by a power-boat safety demonstration by SUNY Maritime.

On Thursday morning, former President Bill Clinton arrived to address an expectant and excited assembly. His speech went from commending the current president for reinvigorating

PHOTOS BY MATT CARR

U.S. environmental policy to addressing global warming skeptics to urging the kind of advocacy exemplified by the Waterkeeper movement.

Recalling his advocacy for clean water when he was governor of Arkansas, Clinton said, "I came by my interest in clean water honestly." He went on to talk about three lakes near his hometown in Hope, Arkansas, and how the water of one was "clear as day" because it was located in a national park, "where we had the government protecting our precious water," while the others were badly polluted.

He then took up the topic of global warming, noting that he had acquainted himself with the views of that minority of scientists who denied the peril of climate change. "Do you want to take a chance on that five percent?" he asked. It is not only the wiser course but better economics, he added "to do the right thing."

Green technology, he argued, offers a rich opportunity for economic growth and job-creation that was largely ignored by the last administration. He offered the examples of investment in solar and wind energy, which, he said, would produce more jobs than equal investment in traditional technology such as coal plants.

Clinton then graciously saluted the Waterkeepers. "The thing I love about what you do is that you do," he said to laughter and applause. "You don't just talk about it." This commitment to action, he insisted, is just what is needed to counteract the threats to our environment—action not only to enact laws but to enforce them, "to take good intentions and change something." He encouraged even greater advocacy and advised the Waterkeepers to return to their communities and take steps to prove that strong environmental policy is also good economics.

Following the President, climate-change scientist Dr. James Hansen, Richard Heinberg, an expert on peak-oil and peak-coal issues, and Yun Jianli, the Middle Han Waterkeeper in China, delivered addresses. Sir Robert Swan, who was the first person to walk to both the North and South Poles, offered an especially stirring closing presentation.

Majora Carter, environmental activist and MacArthur "genius award" recipient, keynoted Friday with an inspirational account of the promising efforts of nonprofit groups, including the organization she led, Sustainable South Bronx, to green the South Bronx. In the evening, John H. Dunnigan, assistant administrator of the National Oceanic and Atmospheric Administration, informed a dinner gathering about his agency's latest efforts to apply sound science to decisions about our oceans. Afterward the attendees boarded a ferry that carried them, under a sky of dazzling oranges and reds, down the East River to the World Financial Center in Lower Manhattan.

The final day began with Cartagena Baykeeper Elizabeth Ramirez discussing her organization's efforts to save critical mangrove habitat in her watershed. Afterward, Terry O'Day of Environment Now,

Bringing It All Back Home

The Waterkeeper movement traces its roots back to the 1960s and the Hudson River, where ccommercial and recreational fishermen, concerned about industrial pollution and depleted fish stocks, banded together to restore the health of their river. On a raw, windy March evening in 1966, more than 300 concerned citizens met in an American Legion Hall in the village of Crotonville and created the Hudson River Fisherman's Association—the forerunner of the first Waterkeeper organization, Hudson Riverkeeper.

In 1983, they appointed a Riverkeeper to patrol the watershed and identify threats to clean water. The Riverkeeper became widely recognized as an effective environmental advocate and quickly became a model for watershed protection of rivers and other water bodies. Hosting the Waterkeeper Conference in New York was a way to "Bring It All Back Home."

Karen Outlaw of Norcross Wildlife Foundation, and Larry Shapiro of Rockefeller Family Fund gave Waterkeepers an inside look at foundation giving and discussed the best approaches for getting foundations to support the Waterkeeper movement.

The conference closed with a 10th -anniversary celebration at the Winter Garden in Manhattan, where Robert F. Kennedy Jr. gave a rousing speech and reminded the hundreds of Waterkeeper staff that the Waterkeeper model of environmental advocacy is the best hope for the world's water resources and the people and communities who rely on them.

Each year the conference has grown larger and more substantive, and this year's event set records not only for the greatest number of Waterkeepers attending, but also for the highest proportion of total representation. It was inspiring to see Waterkeeper staff from Bangladesh, Canada, China, Colombia, India, Senegal, Mexico and other countries making connections with each other and with U.S. Waterkeepers and other clean-water advocates. At week's end, everyone seemed reinvigorated for the continued fight for clean water around the globe, and many expressed their determination to be back for the 2010 conference in Baja California, Mexico.

What You Can Do to Make an Impact

Governments and corporations aren't the only ones that need to make changes now to stop climate change – everyone needs to pitch in at home, in the office, and on the road:

- Make sure your home and office are well insulated and sealed, and replace drafty windows and doors with EnergyStar models.
- Plant trees around buildings to shade them in the summer, to act as wind-breaks, and to absorb carbon dioxide from the atmosphere.
- Replace old appliances and equipment with newer energy-efficient EnergyStar models, and set computers, faxes, printers, and copiers to "sleep" or "power–down" mode after 30 minutes of inactivity.
- Unplug rarely used appliances and use a power strip to cut power off to electrical equipment when you aren't using it. Many devices draw electricity even when they aren't on.
- Replace incandescent light bulbs with low-mercury compact fluorescents (CFLs) or light-emitting diodes (LEDs).
- Find out where your electricity comes from. Many energy suppliers now allow you to choose renewable sources of energy rather than dirty fossil fuels.
- Reduce, reuse, and recycle.
- Purchase locally crafted goods, including food, rather than products shipped long distances.
- Whenever possible, walk or bike to get around, or use mass transit. When you must drive, use the most fuel-efficient car possible, and be sure that it is tuned up and its tires are appropriately inflated.
- Join our new campaign, "The Dirty Lie," at www.thedirtylie.com.

— Janelle Robbins

The whole conference in New York City was excellent, as usual — the program, lectures, social events, just everything. I met my old friends, people I already know and admire, and many new interesting people and new friends.

Helena Kralova | Morava Riverkeeper | Czech Republic

Words can not express my gratitude for the opportunity to attend the Waterkeeper conference last week. To partake in the workshops, and meeting so many incredible people — Bobby Kennedy, Jr., President Clinton, Daryl Hall, and Waterkeeper staff — is definitely something that few people, if anyone, from Idaho have ever experienced. Please know that I have already shared the outcome with many in Silver Valley Waterkeeper and feel I have only begun! Thank you, thank you, thank you!!!

Barbara Miller | Silver Valley Waterkeeper | Kellogg, Idaho

The conference was an excellent opportunity for Hann Baykeeper to extend its network of friends. It's very important to participate every year in order to be familiar with the members. Some natural aspects of our African culture hold us back a bit when it comes to ice-breaking conversations, but this conference (the speech at the restaurant, roundtables, boat rides) was perfectly set for us to feel confident, learn from the Alliance and other organizations and talk about what we do in Senegal.

Malick Sene | Hann Baykeeper IPC | Senegal

To reiterate everyone's comments so far, I had an incredible time at the conference! Thank you to all who made the experience a wonderful and insightful one.

Cyrus Buffum | Charleston Waterkeeper | Charleston, South Carolina

Thank you

Waterkeeper Alliance would like to thank its co-hosts, Hudson Riverkeeper (Alex Matthiessen), Long Island Soundkeeper (Terry Backer), and New York/New Jersey Baykeeper (Debbie Mans) for their amazing work on the conference. We also thank Heather George for her tremendous effort as conference coordinator, and Matt Carr for his wonderful photography. In addition, we would like to thank our amazing army of volunteers:

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