



Riverlovers Currents

Volume 28, Number 8-9, August-September 2015

Message from the President

The annual Clearwater Great Hudson River Revival festival was held on Father's Day weekend, June 20th and June 21st. Our outreach table was part of the Sloop Club tent, and events, performances and environmental lectures took place in the tent throughout the weekend.

Riverlovers have an opportunity to participate in Iona Island Marsh public programs, just south of the Bear Mountain bridge, this summer. The dates are:

- Thursday, August 6, 12 noon to 2:30pm
- Sunday, August 30, 10am to 12:30pm

Call me if you are interested in one of these canoe trips thru the Iona marsh, with canoes and equipment provided.

This summer we will have an opportunity to sail on our members' sailboat, the Solar Wind, every three weeks or so (call Warren for details), and we will also sail on the mighty Hudson River Sloop Clearwater. Bill Flank, a member of the Clearwater Board of Directors, got us a Clearwater sail date: Friday, July 31st from 6 to 8pm, sailing from Beacon and boarding at 5:30pm. Invite family, friends and prospective members, and call Warren now to reserve your places onboard, up to the boat's capacity.

We ask for donations of \$15 for members and \$25 for non-members and guests, and we will share this with our Clearwater parent organization. This low-cost sunset sail is one of the benefits of Riverlovers membership. Please make your checks out to Riverlovers and mail them to our treasurer, Daria Gregg, at 51 Old Albany Post Road, Ossining, NY 10562. Since we treat this activity as a potluck, bring sandwiches, finger foods, and small bottles of juices, water or soda to share.

We'll plan on resuming our screenings of videos of environmental interest at our Fall Potlucks, starting September 18th, when we'll show the uproarious spoof Civil War video "The Battle of Pussy Willow Creek." On October 16th we plan to show "Crude Awakening," an environmental video exploring future oil shortages. We'll also resume our hikes to places like Oscawana Island Park and the Croton Gorge Park. More details in our next issue of the *Currents*.

Come on out to our meetings, and participate in our activities. Members and non-members are welcome. Together we can educate ourselves and others to protect the Hudson River, and save the Earth and its climate for ourselves and future generations to enjoy.

Where We Stand With Renewables

The Energy Department reported that solar energy production in the U.S. doubled from 2013 to 2014, but coal-burning power plants still provide about half our electricity. Solar power produced 18 million megawatts (MW) in 2014, and wind power generated nearly 14 million MW.

Coal, however, continues to dominate our energy economy, producing almost 1.6 billion MW in 2014, compared to 281 million MW for renewables (wind, solar, biomass and geothermal energy). Hydroelectric power, which is also considered renewable, added 259 million MW, but was eclipsed in 2014 by the other renewables for the first time.

Although the U.S. is slowly but steadily shifting toward more renewable energy sources, the dominance of our coal-fired power-plant-driven electric grid will continue for the foreseeable future. Renewables overall represented just 18% of our electrical energy production. This needs to grow a lot faster if we are serious about averting a climate disaster.

Power Plants, Dirty Air, And Death

According to EPA data, about 11,000 people die prematurely each year as a result of power plant pollution. The agency reports that a large portion of U.S. air pollution comes from these plants: 77% of the acid gases, 62% of the arsenic, 60% of the sulfur dioxide, 50% of the mercury, 28% of the nickel, 22% of the chromium and 13% of the nitrogen oxides.

EPA believes its Mercury and Air Toxics Standards, which began to take effect in April, will produce between \$37 and \$90 billion in public health cost savings per year. This translates into lower health care costs for downwind residents, fewer lost workdays, and reduction in early deaths. A number of industry groups and Republican state attorneys general, however, claim EPA has refused to consider the cost of its regulation, resulting in rate increases across the country, and threatening grid reliability.

So there it is—a simple choice between your health and life vs. additional profits for the owners of the power plants. Does anyone see anything wrong with this picture?

In Memoriam

Condolences to Warren and Bruni on the passing of Warren's father, Eric Lindholm, on May 22, 2015 at the age of 95. He was a Navy veteran and a Mason. He is survived by Adele, his wife of 71 years, another son, Robert and his wife, Barbara, four grandchildren and five great grandchildren.

Book Review—The Melting World

In Christopher White's book, "The Melting World—A Journey Across America's Vanishing Glaciers" (St. Martin's, \$26.99), mountain glaciers are described as being among the most sensitive measures of the earth's changing climate. Glaciers supply about half of the planet's fresh water, so critical for drinking and irrigation purposes, and once it's gone, we have no idea how to replace it.

The author spent five years among the vast glacier systems in the Rocky Mountains, chronicling Daniel Fagre's work. He's the government scientist who made headlines not long ago by projecting that Glacier National Park, which had at one time been home to 150 glaciers, would become ice-free by 2020. In order to measure the retreat of the glaciers, Fagre and his team navigated dangerous crevasses, repaired complicated monitoring tools in howling winds, dug deep holes in packed snow and evaded both avalanches and grizzly bears.

They carefully and accurately documented the decline of the ice, knowing how high the stakes are. They know their research will be challenged by the sceptics in Washington and the fossil fuel industry—the deniers—who will question every measurement and every aspect of the science of climate change.

While the book describes stunning vistas and spectacular flowering meadows, it also conveys an outdoor adventure and a moving story about the science of measuring a melting mountain. It's just one more warning—if we really need one—that the warming world in our future is already here.

Water & Fracking—Before & After

For every well they drill, fracking operators pump 3 million to 5 million gallons of water thousands of feet underground. There, the water opens fissures in the rock, allowing natural gas and oil to seep out of shale geologic formations. The water gets mixed with additives such as sand, viscosity improvers and surfactants among others, to form fracking fluid, which is used to optimize the amount of fuel extracted.

But what goes down comes up. Shortly after the water gets injected, it flows back out of the well. The well releases water over its lifetime, larger volumes in the early stages and smaller quantities later on. The early-stage water—the so-called flowback—still contains many of the hazardous additives from the fracking fluid. As oil and gas production continues, water from the geologic formation mixes with the fracking fluid, bringing with it brine and other substances from underground. This "produced water" can be many times saltier than seawater—the salinity varies with the mineral content of the geologic formation. The flowback and produced water together make up fracking wastewater.

Operators have limited options for dealing with fracking wastewater. In Pennsylvania, for example, operators used to be able to take it to sewage treatment facilities that could superficially clean it up and discharge it into creeks or rivers. Because of regulations the state adopted in 2012, that option is no longer available. Now, companies transport it to sites where the wastewater gets injected into wells thousands of feet below the surface and sequestered there. Alternatively, they can store it and treat it as needed for reuse in subsequent fracking operations, but that's more expensive.

Even though these deep-well-injection and recycled-water holding ponds appear to contain the wastewater, accidents happen, as in North Dakota recently. The concern is, if there's a spill or accident, it would be important to know exactly what's in the wastewater, since leaks could affect the quality of nearby rivers and other water bodies.

But figuring out the composition is no easy task. The fracking wastewater is a complex mixture of organics, metals, and radioactive materials, and each company has its own secret recipe. Some of these substances get put into the water as fracking fluid additives, some are formed during degradation or transformation reactions, and some come from the underground geologic formations. Many researchers are working to identify these components and their relative concentrations, some of which are known to be dangerous, but we're letting the frackers go full speed ahead anyway, before we know how to effectively protect our water resources.

Mercury, EPA And The Supreme Court

The Supreme Court is considering whether EPA went too far when it finalized a rule on mercury releases to protect public health that the agency estimates will cost electric utilities about \$10 billion per year. Mercury is a potent neurotoxin, and tiny doses can harm children's development and pose risks for fetuses of pregnant women.

Coal-burning power plants, which are the largest source of mercury in the U.S., are facing a series of EPA regulations that require owners to invest in pollution controls or shut down aging facilities. Power plants are being required to reduce their mercury emissions by 90%, but the needed technology will also reduce acid gas emissions by 88% and particulate formers by 41% as well.

Numerous studies have shown that mercury from power plants make many fish unsafe for human consumption in 65% of U.S. waters that receive atmospheric fallout of mercury, often far away from the emission source. In addition, the acid gases and microscopic emitted particles cause asthma, lung disease and heart disease.

At the Supreme Court hearing, it was noted that the relevant section of the Clean Air Act does not mention costs anywhere in its text. In its recent decisions, the Court has generally sided with EPA and has not required it to consider costs, but only to consider a "plausible reading" of statutory language. Let's hope that includes public health protections.

State Health Dept. Fish Consumption Advice

Here's the latest advisory for the Lower Hudson River from the State Health Department. In addition to limitations on eating fish, they also recommend cutting away fat along the sides, back and belly of fish to reduce PCBs. Fish should be trimmed, then cooked on a rack so fat drips away. It should not be pan-fried, and drippings should not be used for stock.

Women under 50 and children under 15 should not eat any fish from the Hudson River, to avoid harmful PCBs dumped there by General Electric Corporation.

Catfish and American eel should not be eaten by anyone because of their very high levels of contamination. Up to six crabs per week can be eaten by men over 15 and women over 50, but the green stuff (tomalley) should be avoided and the cooking water should be discarded.

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What's Happening When

Sundays, 10am-3pm, **Farmers' Market** at the Beacon Sloop Club, at Long Dock Park in Beacon. Local cheeses, eggs, pasta, bread, lamb, fruits and vegetables.

July 31, Fri, 6-8pm, **Riverlovers annual sunset sail aboard the Clearwater**, sailing from Beacon. Meet at 5:30pm at the Beacon dock adjacent to the rail station. Call Warren to reserve your spot. See page 1 for more details.

Aug 6, Thurs, 7:30pm, **Ferry Sloops' Music & Lecture Series**. Lisa Jane Lipkin. At Shattemuc Yacht Club in Ossining. Potluck supper at 6:30, business meeting at 7:00, program 7:30-9:00pm. All Riverlovers are invited.

Aug 9, Sun, noon-5pm, **Beacon Sloop Club's Annual Corn Festival**, at Pete & Toshi Seeger Riverfront Park, Beacon (on the water just north of the train station). Info: www.beaconsloopclub.org, under "festivals."

Sept 2, Wed, 7:30pm, **Ferry Sloops' Music & Lecture Series**. Lara Herscovitch. At Shattemuc Yacht Club in Ossining. Potluck supper at 6:30, business meeting at 7:00, program 7:30-9:00pm. All Riverlovers are invited.

Sept 18, Fri, 6:30pm, **Riverlovers Monthly Potluck** at Croton Point Nature Center. We'll show the hilarious spoof Civil War video "The Battle of Pussy Willow Creek." See page 1. Info: www.Riverlovers.org.

Fracking Spills By The Numbers

The Colorado Oil and Gas Conservation Commission reports that there were 53,288 active wells in the state as of March 2015. For 2013, the most recent year for which full data are available, there were 600 spills from fracking operations, up from 399 in 2012.

These horizontal wells can be a mile in length, and a single vertical drilling site can launch more than 20 horizontal wells. The amount of water needed can be 20 times that of conventional wells, and can be more than 3 million gallons per well. Water coming back up from a well after the initial injection is called "produced water" and can contain a huge brew of chemicals—some quite toxic, and some, like sand, fairly innocuous—that can't be handled by sewage treatment plants where it is frequently sent.

The amount of "produced water" generated by fracking wells in Colorado in 2013 was 388 million barrels, at 42 gallons to the barrel. Of that amount, 14,241 barrels were reported spilled. The spills are just the tip of the iceberg, compared to the huge amounts of water that are contaminated and that infiltrate groundwater and other valuable water resources in areas where that is in short supply.

We desperately need to switch from fossil fuels to renewable energy before we poison our water resources and huge swaths of our natural environment. Sadly, dirty money begets a dirty environment.

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For adult males and women over 50, one meal per month is permissible for one of the following species: striped bass, white perch, carp, bluefish, smallmouth and largemouth bass, walleye, brown bullhead, rainbow smelt, Atlantic needlefish and goldfish. They can eat all other Lower Hudson fish species up to once a week.

Here's how to join Riverlovers...

(the local Clearwater Sloop Club in the Northern Westchester-Putnam County area)

Application for Riverlovers Membership

Name _____

Address _____

City _____ State _____

Zip _____ Telephone _____

Renewal ___ New ___ Additional Contribution \$ _____

Please send check (\$25 individual, \$35 family) for 2015 to: Riverlovers, P.O. Box 285, Croton-on-Hudson, NY 10520.

I want to have *Riverlovers Currents* delivered electronically.

Send to this e-mail _____

Yes! I Also Want To Join Clearwater

Please sign me up in the following membership category:

Individual \$40 Mariner \$500

Family \$55 Sailing-Master \$1000

Contributor \$100 Benefactor \$5000

Sponsor \$200 Student \$10

Name _____

Address _____

City _____ State _____ Zip _____

Please include check payable to Clearwater, or charge by credit card

Visa MC Discover Amex

Account No. _____

Exp. Date _____ Signature _____

Mail To: Clearwater, Inc.
724 Wolcott Avenue
Beacon, NY 12508

Your Clearwater membership gets you the *Navigator* and other benefits, along with being part of Riverlovers' "parent" organization representing individuals and Sloop Clubs up and down the Hudson Valley "working for the River."

Riverlovers - Who We Are

Riverlovers, Inc. is a chartered Sloop Club of the Hudson River Sloop Clearwater, Inc., an environmental non-profit membership organization whose most visible symbol is its member-owned and operated 106-ft. sloop "Clearwater." As a local affiliate, Riverlovers' purposes are:

- Maintaining an active Sloop Club in the Northern Westchester-Putnam County area;
- Meeting the needs and interests of individuals through a variety of interest groups, including monthly Potluck dinner meetings with varied programs, environmental education and awareness, boats and sailing, concerts and festivals;
- Organizing trips and recreational activities, seminars and workshops, learn-to-sail programs and Clearwater visits;
- Research, education and action to protect our rivers and our environment;
- Working for access and effective land use along the Hudson River and its tributaries;
- Boating projects on the Hudson River, to reach out to the surrounding community for educational and recreational purposes.

We invite you to join us. Contact our interest group coordinators, or write to Riverlovers, Inc., P.O. Box 285, Croton-on-Hudson, NY 10520. Together we can do a lot!



Interest Group Coordinators

Interest Group	Coordinator	Phone
Envir. Education	Bill Flank	238-8240
Membership	Gunnar Andersen	432-3112
Newsletter	Bill Flank	238-8240
Newsletter Distribution	Cynthia Andersen	432-3112
Outreach		
Photographer/Archivist	Beverly Dyckman	739-5057
Potluck	Warren Lindholm	739-9028
Publicity		

Web Page: www.riverlovers.org

Riverlovers Officers

President:	Warren Lindholm	739-9028
Vice Pres. (programs):	Robin Fox	271-6088
Secretary:	Cynthia Andersen	432-3112
Treasurer:	Daria Gregg	944-8396
President-Emeriti	Eric Marshall	827-3696
	Gunnar Andersen	432-3112

Newsletter Submissions

Please send news articles and other items of interest to Riverlovers Currents, P.O. Box 285, Croton-on-Hudson, NY 10520. Include your name, address, and phone number. Names can be omitted on request.

Back issues of *Riverlovers Currents* are available at our web site, www.riverlovers.org

Newsletter Committee: Editor, Bill Flank; Associate Editor, Mel Fitting

August-September Newsletter Contributors: Bill Flank, Warren Lindholm, Christopher White

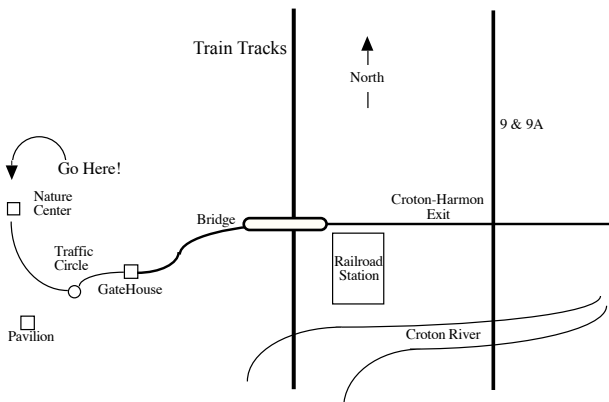
Riverlovers Monthly Potluck and screening of *The Battle of Pussy Willow Creek*



Riverlovers, Inc.

P.O. Box 285

Croton-on-Hudson, NY 10520



Friday, September 18, 2015
6:30pm
Croton Point Nature Center