



# Riverlovers Currents

Volume 26, Number 6-7, June-July 2013

## Message From The President

Riverlovers have had an exciting Spring in 2013! Our own Daria Gregg led an informative and insightful tour of Wildflower Island in Teatown Lake Reservation, and Riverlovers filled up the entire Wildflower tour on April 28<sup>th</sup>.

The next week, Sunday, May 5<sup>th</sup>, we had a nice walk in Sylvan Lake Park Preserve, hiking from the Morris Lane entrance off of Lexington Ave. We found the gas pipeline and walked to the Stoney St. entrance at the other end of the preserve. We explored that end of the park, an abandoned farm that had nice level trails. Then we went west to the quarry part of the preserve, saw the quarry equipment and huge piles of cut granite. We found a 120-foot cliff. What a view! Then we walked down a steep trail to the giant quarry oak with its 6 foot diameter trunk. Magnificent!

At the May 17<sup>th</sup> meeting I gave a talk on fossil fuel power generation and its effect on rising CO<sub>2</sub> levels. Our country depends on most of its electricity from fossil power generation. See my summary in this issue of the *Currents*.

We are looking forward to the Friends of the Great Swamp canoe trip on Saturday, May 25 at 2:00 pm. (Oops! We had the date wrong last month.) This trip will be magical, seeing the wildlife while following the endless twists and turns on a one-way trip to Haviland Hollow Brook.

The Clearwater Hudson River Revival is the weekend of June 15<sup>th</sup> and 16<sup>th</sup>. Remember to purchase your tickets for this important event online. You can even follow our link on our website to Clearwater. We will have a short monthly Potluck on Friday at 6:30 pm and it will be a sign-up for Riverlovers Revival volunteers.

We are going to sail on our members' sailboat, *Solar Wind*, July 28 at 2:00 pm at Senasqua Park in Croton. Call me to participate; we only have space for 4 passengers.

In August or September we plan to rent kayaks from Hudson River Outfitters in Cold Spring and kayak into Constitution Marsh. Watch for more details in the next *Currents*.

Bill Flank has arranged with Clearwater for Riverlovers' favorite activity, a sail on the Sloop Clearwater on August 18, at 4:30 pm. It will be a sunset sail at the Beacon dock. One advantage of Riverlovers membership is a low-cost sail on the Clearwater. We are asking for suggested donations of \$15 for members and \$25 for non-members, which we share with our parent organization. Send a check made out to Riverlovers to our treasurer, Daria Gregg, at 51 Old Albany Post Road, Ossining N.Y. 10562. It's a real bargain for everyone!

## Riverlovers Visit Wildflower Island

Riverlovers enjoyed a spring day on Teatown's Wildflower Island. It is a unique conservation area with over 230 different native species of wildflowers. The island was created in 1928 when Gerard Swope flooded his meadow, by damming up Bailey Brook. Two islands appeared and in 1982 one of the islands became Wildflower Island because of the unique habitat beneficial to so many treasures like Lady Slippers. Over the 25+ years the island has flourished and grown under the careful stewardship of dedicated individuals. Of course you can never see all 230 species on any one day.

On April 28<sup>th</sup>, we saw many of the "spring ephemerals"—those spring flowers that only arrive before the trees have leafed out and sunlight hits the forest floor. Some of the highlights of our tour were Trout-Lily, Red Trillium, Rue Anemone, Columbine, Dutchman's Breeches or Wild Bleeding Heart, and Early Saxifrage. Our own guide, Daria Gregg, tried to fill us with information about some of the flowers beyond just pointing them out. Afterwards we all sat in the warm sun and enjoyed lunch or snacks together.

## Walkabout Coffeehouse Season Finale

It was glorious! It was full of surprises! It was a great way to cap the 25<sup>th</sup> season of Walkabout Clearwater Coffeehouses. The Work 'o the Weavers performance is constantly evolving, and after ten years from their first Coffeehouse performance, we finally got to see and hear a polished, enhanced version that combined all the old Weavers' favorites with some new songs that the Weavers would be proud of.

Fred Hellerman was there, and he sang some new stuff as well as joined in on some old stuff. Bob Sherman, of *Woody's Children* fame, was there and shared a few historic thoughts. The Walkabout Clearwater Chorus started the evening with a rousing Teachabout, and Work 'o the Weavers capped it off with an encore that left the audience thinking, "Wasn't that a time!" It was a fitting way to end an outstanding season.

## Pay your dues now—support our river! \$25 Individual & \$35 Family

It cost \$8.60 a year to send you the *Riverlovers Currents*. Please consider adding at least that much to your annual dues. Support your Newsletter and the river, and get your friends to join you.

## Global Warming From Fossil Fuel Power

By Warren Lindholm

As you may know, in my 39-year career in Con Edison, I was a Performance Technician for the Waterside Generating Station located on the East Side of Manhattan. Waterside Power Plant could generate 500,000 kilowatts for the grid and 3,000,000 lbs. of steam for the Steam System.

My department (Performance) could best be described as an "Efficiency" department. Our group totaled steam flows, electric generation, steam-sendout, and fuel usage. We would calculate boiler efficiencies, water rate for turbines, and most important, heat rate of the station. Heat rate is best described as the heat value of fuels burned divided by electricity produced. The units for heat rate are BTU (British Thermal Units) per net kilowatt hour of electric generation.

A lower heat rate is desirable. Waterside's heat rate was between 11,500 and 12,500 BTU/kwhr. Heat rates below 10,000 BTU/kwhr are rare. As a comparison, the emergency home generators use between ½ and 1 gallon petroleum per hour, with heat rates between 60,000 and 80,000 BTU/kwhr.

To get this efficiency, Waterside had boilers 150 feet high with furnace chambers 40 feet by 40 feet. The water for the boilers was pre-heated with feedwater heaters and an economizer at the flue gas exit. The dry steam went through a superheater before leaving the boiler. At high loads, Waterside would burn 40,000 gallons of oil per hour, or 6,000,000 cubic feet of natural gas per hour. In combustion, almost all the oxygen in the air (20.95%) is converted to carbon dioxide. The levels in the flue gas leaving the smoke stack were between 17% and 19%. These levels are typical of fossil fuel power plants.

One of the functions that I engaged in, to improve boiler efficiency at Waterside, was to do boiler inspections. I would look for hot spots on the boiler casing, which cause heat to escape. I would also look for casing leaks which would allow air to infiltrate the boiler walls. The boilers were run with negative air pressure to prevent flue gases from escaping, but this would reduce the capacity and efficiency of the boilers. These are 3-pass boilers, and I would climb inside the boilers looking for internal damage that would cause the hot flue gasses to bypass the superheaters.

In summary, the United States and the world need more renewable power, such as wind, solar, and hydro. Wind and solar power need back-up when conditions are not favorable.

Let's not forget about nuclear power, and a 2000 megawatt power plant such as Indian Point. A fossil fuel replacement power plant with a 12,000 BTU/kilowatt hour heat rate would need to burn 3,840,000 gallons of oil per day, or 23,000 tons of coal per day, or 559,000,000 cubic feet of gas per day. The CO<sub>2</sub> release would be 44,160 tons per day for oil, or 34,000 tons per day for gas, or 42,100 tons per day for coal. These figures are attributable to the carbon in the fuels combining with the oxygen in the air.

A dubious milestone has been reached: the CO<sub>2</sub> levels in the atmosphere have now reached 400 parts per million. My old reference book that I consulted had the CO<sub>2</sub> level at 330 parts per million. Wow! That's quite a jump! We really need to find some good answers, don't we?

## A Tale Of Two Cities And The Sea

New York is still recovering from Hurricane Sandy and its aftermath, and many of those affected are not doing very well. The City of London, vulnerable to a tidal Thames River much as New York is vulnerable to the Hudson and East Rivers, acted a generation ago to banish the threat of catastrophic flooding.

Construction began in 1974 on the Thames Barrier, about 11 miles downriver from London's city center. When the North Sea surges because of storms, pushing floodwaters upriver, the barrier's 10 enormous steel gates rotate and form a flood barrier. Since its completion in 1982, the barrier has been closed 119 times, at increasing frequency as the planet warms, but it has never been breached.

Before the barrier, London sounded air-raid sirens, moved buses to higher ground, closed their subway stations and implemented contingency plans, similar to what New York does now. But now, when the seas rise, as they often do, Londoners can go about their normal business without even being aware the barrier is being used.

If only New York had the vision, and spent the necessary money, to do the same.

*Thanks to Art Ansel for this news item.*

## Nuclear Near-Misses vs. Common Sense

The Union of Concerned Scientists has been conducting an annual review of the Nuclear Regulatory Commission's performance in overseeing the nuclear industry. They have identified a number of near-miss incidents, several of which resulted in at least a hundred-fold increase in the risk of serious reactor core damage.

Analysis of the near-miss data for the three years covered by UCS reports shows that 40 of the nation's 104 operating commercial reactors experienced a near-miss between 2010 and 2012, with 12 reactors experiencing at least two near-miss events, and three—at Fort Calhoun in Nebraska, Palisades in Michigan, and Wolf Creek in Kansas—experiencing three or more. The three-year data indicate the average U.S. reactor is likely to experience seven near-misses over its 40-year license period (increasing to about ten if the license is extended by 20 years, as most have been).

While none of the near-misses UCS has studied so far has resulted in harm to nuclear plant workers or the public, the "safety pyramid" principle used by industrial safety experts suggests that reducing the frequency of near-misses will also reduce the likelihood of a major accident that could cause serious harm. Is a nuclear plant in the midst of a heavily populated area like ours best described as an accident waiting to happen, or as a ticking time bomb? Or like playing Russian roulette?

If those are uncomfortable choices, then maybe the unsafe, un-secure and unnecessary Indian Point facility shouldn't be granted an operating license extension. That's not rocket science, it's just common sense.





# What's Happening When

Sundays, 10am-3pm, **Farmers' Market** at the Beacon Sloop Club, at the Beacon harbor. Local cheeses, eggs, pasta, bread, lamb, mushroom spring rolls, fruits and vegetables.

June 1, Sat, noon, **Cornwall Riverfest**, Donahue Park, Cornwall-on-Hudson.

June 9, Sun, noon-5pm, **Beacon Sloop Club Strawberry Festival**, Riverfront Park, Beacon. Come and enjoy this big annual festival with something for everyone.

June 14, Fri, 6:30pm, **Riverlovers Monthly Potluck at Croton Point Nature Center**. Share some food and drink, and sign up for shifts for Riverlovers Revival volunteers in the Sloop Club tent. Info: [www.Riverlovers.org](http://www.Riverlovers.org).

June 15-16, Sat-Sun, **Clearwater's Great Hudson River Revival at Croton Point**. The festival event of the year! Mark date, & pitch in to help staff Riverlovers' outreach table. If you haven't already, call Warren now to sign up for a Volunteer pass.

July 4, Thurs, **Celebrate** the country's first steps on the road to rationality.

July 28, Sun, 2:00pm, **Sail on the Solar Wind**, from Senasqua Park in Croton. Limited space. Call Warren if interested.

Aug 18, Sun, 4:30-8pm, **Riverlovers Annual Sail on Hudson River Sloop Clearwater**. We sail from the Beacon dock. Call Warren to reserve your spot. Send donation checks made out to Riverlovers (\$15 members, \$25 non-members) to our treasurer, Daria Gregg, at 51 Old Albany Post Road, Ossining, NY 10562.

## Another Coal-Fired Plant Gone

In December, Dynegy Inc. announced that it had sold its Danskammer coal-fired power plant in the Mid-Hudson Valley to ICS NY Holdings, which plans to tear it down. The plant was purchased for just \$3.5 million through a proceeding with the U.S. Bankruptcy Court.

Dynegy's decision to get rid of its old, dirty Danskammer plant may have been influenced by the BART (Best Available Retrofit Technology) process underway for it, under the direction of the New York Department of Environmental Conservation and the EPA. As part of this process, the Sierra Club, working with Earthjustice, submitted extensive comments that resulted in getting the EPA to significantly lower its limits on sulfur dioxide pollution from the Danskammer plant. Sulfur dioxide is a key precursor of acid rain.

Earlier, in October, pressure was applied when the Sierra Club and the National Parks Conservation Association, represented by Earthjustice, filed a lawsuit in the Second Circuit demanding even tighter pollution controls. Once the Danskammer generating plant is gone, there will be only four coal plants left in New York State. Slowly but surely, we're getting there.

## How We Use/Waste Our Water

It takes 192 gal. of water	to produce	1 lb. of bread
37 gal. of water	to produce	1 cup of coffee
1860 gal. of water	to produce	1 lb. of beef
2872 gal. of water	to produce	1 pair of blue jeans
5 to 15 gal./day	for our	personal needs

Is this the best way to make use of Earth's precious water?

### 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 2013 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:

- |                                   |       |                                      |        |
|-----------------------------------|-------|--------------------------------------|--------|
| <input type="radio"/> Individual  | \$40  | <input type="radio"/> Mariner        | \$500  |
| <input type="radio"/> Family      | \$55  | <input type="radio"/> Sailing-Master | \$1000 |
| <input type="radio"/> Contributor | \$100 | <input type="radio"/> Benefactor     | \$5000 |
| <input type="radio"/> Sponsor     | \$200 | <input type="radio"/> Student        | \$10   |

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

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

- |                            |                          |                                |                            |
|----------------------------|--------------------------|--------------------------------|----------------------------|
| <input type="radio"/> Visa | <input type="radio"/> MC | <input type="radio"/> Discover | <input type="radio"/> 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		
ShadFest	Robin Fox	271-6088

Web Page: [www.riverlovers.org](http://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](http://www.riverlovers.org)

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

June-July Newsletter Contributors: Daria Gregg, Warren Lindholm

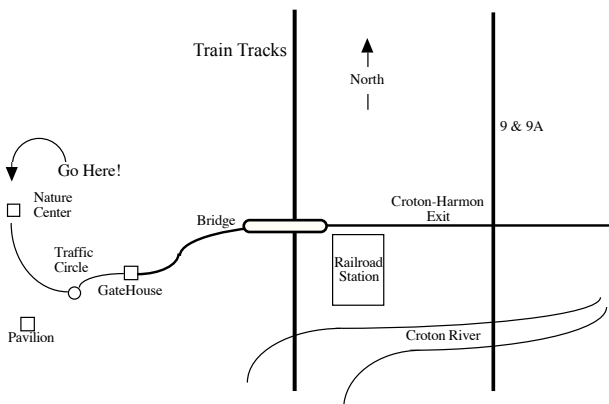
## Riverlovers Monthly Potluck and Pre-Revival Check-In



**Riverlovers, Inc.**

P.O. Box 285

Croton-on-Hudson, NY 10520



**Friday, June 14, 2013**

**6:30pm**

**Croton Point Nature Center**