

## HUDSON RIVER ALMANAC for OCTOBER 10, 2013

### A DAY IN THE LIFE OF THE HUDSON RIVER

Compiled by Steve Stanne, Hudson River Estuary Program Education Coordinator  
New York State Department of Environmental Conservation

#### <<<<< OVERVIEW >>>>>

This special Hudson River Almanac offers a snapshot of the eleventh annual **Day in the Life of the Hudson River**, during which students sampled the Hudson from its non-tidal reaches and tributaries above Troy to the Lower Bay of New York Harbor. At more than 60 sites, some 3,000 participants learned about their piece of the river and - by sharing data online - put it in the context of the entire system. The entries in this journal came from students, classroom teachers, environmental educators, and "runners" who visited multiple sites to document activities and pick up samples for later testing.

#### <<<<< HIGHLIGHT OF THE DAY >>>>>

**South Beach, Staten Island:** To reach the beach, students from St. Clare's School had to clamber over a high berm built after Superstorm Sandy's visit last year. From the top of the berm, intended to protect against surge from future storms, we could see beyond the estuary to the Atlantic Ocean, and watch large ships entering New York Harbor. An offshore storm was sending a biting northeast wind and three to four foot waves onto the beach; the surf made seining difficult, snatching the net out of our hands and threatening to knock us over. Multiple hauls produced no fish, but we did net many mole crabs - a creature I had not seen before - often called sand crabs because they live in the surf zone on sandy ocean beaches.

- Steve Stanne, Hudson River Estuary Program, NYSDEC

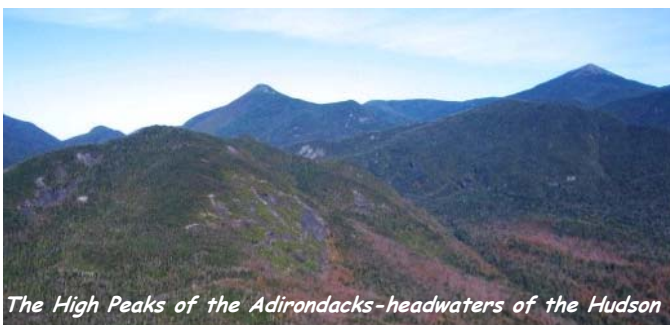


*St. Clare's students at South Beach, Staten Island*



*Mole crabs*

#### <<<<< NATURAL HISTORY NOTES >>>>>



*The High Peaks of the Adirondacks-headwaters of the Hudson*

**Headwaters of the Hudson River, Newcomb, Adirondack Mountains:** Who can do just one Day in the Life? I started the day before, near the old mining hamlet of Tahawas. I climbed Mt. Adams and 63 steps up its fire tower to find myself in the mystical heart of the headwaters. Visibility was stunning, offering a spectacular 360 degree, 100 mile view of high peaks and water shedding slopes. When the wind died I could hear the vast sound of all that mountain water. I finally found and grasped the source of the river.

I woke up at 4 a.m. on Day in the Life of the Hudson River and scrambled down to the edge of Arbutus Lake, another headwater source of the Hudson in Newcomb. The stillest water I've ever seen. Only bug wakes rippled the uncannily flat surface. Several crayfish cruised the shallow gravel bottom. I measured several vital signs: Air temperature was a bit above freezing at 35.3° F [1.8° C] and dissolved oxygen [DO] in this still, dark lake was 7.44 milligrams per liter. [Editor's note: With few exceptions we will use milligrams per liter - mg/L - in place of parts per million - ppm - throughout this Almanac; for our purposes the units are equivalent.]

- Doug Reed, Hudson Basin River Watch

**Lock 5, Schuylerville, RM 186:** Currently this is the site of PCBs dredging by GE, so the lock was busy with large tugs and barges coming and going; some full of dredged materials, some full of sand to backfill the river. (More usual here are pleasure boats heading south for the winter.) At 8:30 a.m., a layer of fog covered the river and its valley. It slowly burned off; by 9 a.m. we had sun and clouds. We were treated to a flyover by a couple of great blue herons, several Vs of geese, and the drumming of a pileated woodpecker.



*PCB dredging project on upper Hudson River*

Our group of five children and five adults began our observations and sketches at the new kayak launch. We compiled some preliminary data - air temperature, GPS coordinates, chlorophyll, and measurements of the current (our favorite task) while we waited for Doug Reed. Doug arrived around 10:30 with gear to facilitate measurements of DO, chloride, pH, and turbidity, and to take a core sample. The kids really got into the testing. This year the water was not clear in this freshwater, nontidal section of the Hudson; it was brown, with significant suspended sediment. The secchi disk reading was three quarters of a meter - 75 centimeters [cm]; last year's reading was 120 cm. We ended at noon, with the children enjoying the river and park and all it has to offer.

- Nancy Robertson, Cornell Cooperative Extension & the 4H Homeschoolers

**Riverfront Park, Green Island, RM 153:** Overcast skies and high tide kept a lot of wildlife at bay at the Troy Dam. Students were thrilled by the changes in the water level as the tide went out - the uncovering of the shoreline brought shells, rocks, and formations to light. The State Museum assisted the fishing with an electroshocking backpack which added excitement! The American eels and bluegills collected and added to the aquarium stimulated questions and curiosity!

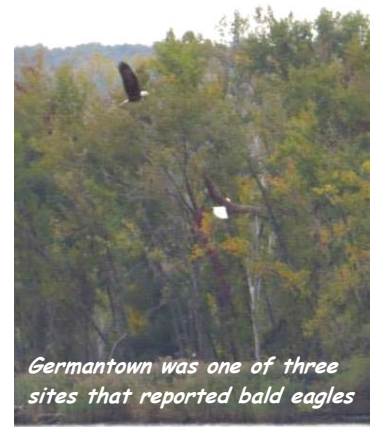
- Kate Perry and the Robert C. Parker School 2nd, 3rd, 6th and 7th graders

**Schodack Island State Park, RM 133:** As we approached the river at Schodack Island State Park, Mr. O'Brien's 4th grade class from Carroll Hill School in Troy was really excited. We had discussed the river meeting the Atlantic and some were surprised that they could not see the ocean from where we were. A bottle floating by was mistaken for a shark and someone knew there were submarines under the water. By day's end I was surrounded by 22 very eager Hudson River scientists who were excited to go home and share what they had learned. With a hug I heard the words "This was the most exciting day of school in my WHOLE life!"

- Dawn Baldwin and Mr. O'Brien's 4th grade class from Carroll Hill School, Troy

**Lasher Memorial Park, Germantown, RM 108:** Columbia Land Conservancy staff took 24 Hudson High School students to the Hudson in Germantown for DEC's annual "Snapshot Day." We all had a blast! We spent the entire morning gathering data about the river, and the students brought real enthusiasm to this project that made the otherwise cloudy day a real treat. They enjoyed testing out our waders as they challenged each other to catch more aquatic wildlife, had fun analyzing physical features around the river with binoculars, and completed numerous water chemistry tests. One of the day's highlights was spotting four adult bald eagles that spent considerable time sparring over the Hudson just offshore.

- Tom Crowell, Columbia Land Conservancy



*Germantown was one of three sites that reported bald eagles*

**Saugerties Lighthouse, Saugerties, RM 102:** On Day in the Life I took my class, "Reading and Writing the Hudson" at Bard College, to visit the Saugerties Lighthouse. Lighthouse keeper Patrick Landewe was kind enough to give us a tour of the lighthouse - up into the observation tower! I asked the students to write Haibuns in response to this experience - the haibun includes prose and poetry. The "poems" here are haiku. What follows are a few of the writings. [*Editor's note: Unfortunately, there was only space for two of the pieces in this Almanac.*]

Thanks

Susan Fox Rogers



The path wound. Wet spots and high water line, the tide comes up, marked by residual plant particles.

First cold morning of the year and the quiet waters sits still.

Serene and frigid. Slowly lapping the dock's edge, stirring lightly with a breeze.

A single boat bobs a little off, man and dog sit like hawks, watching water.

Across the water Clermont stands, white houses with cascading lawns cordon off the river.

Prominent on Hudson, Saugerties Lighthouse towers. Remnant of river days. Contrast to muddy path.

Inside clean teal trim,

Stark wall to grey blue water,

Quiet creaks of stair.

The pinnacle of light rests atop the rounded chamber.

Try to listen for the days past here, murmuring wind and pariah's eyes.

- Katherine Rose

Arms crossed tightly while walking. Wind constant. Steady whaap of windbreaker behind. Hollow wooden sound of Japanese sandals as we clattered over the boardwalk to Saugerties Light House. Then a solid stone base, thick and sturdy, and seated squarely on top a brick wall, mottled peach and grey. We get to go in. It smells like a gas stove and little hallways. There are old maps in the kitchen. The stairs creak under our cautiousness. Upstairs a red spot of a geranium in the window in front of layers of grey water and sky.

Up once more twice up

Teeth dry from smiling in the wind

Come round and point there

Up top my hair whips. Shy pillars of Rose Hill across the water, and a delicate spider's tangle is the Kingston-Rhinecliff bridge in the distance. Up top by the light I can see all the boats coming.

- Annie Trowbridge

**Kingston Point Park, Kingston, RM 92:** A little before 9:00 a.m. we saw an immature and an adult bald eagle flying north along Kingston's previously industrial waterfront. Lots of water chestnuts filled the area, and with a low tide we had to go quite far out to seine. We did many hauls and caught nothing all morning. Between noon and 1:00 p.m. we caught fish - 14 in five hauls. A lot of effort for spottail shiners, golden shiners, striped bass, and white perch!

- Julie and Steve Noble and Bailey Middle School 8th graders

**Freer Park, Port Ewen, RM 90:** The Rondout Valley High School students were very excited to catch a young eel. There was less wind here than at other sites I visited, but it was cool: 52° F [11° C]. An excellent core sample generated lively discussion as probing fingers ventured into muddy - or was it more sandy? - layers.

- Nancy Beard, Hudson River Estuary Program, NYSDEC



*Checking out a core sample*

**Esopus Meadows, HRM 87:** Fifty-six Robert Graves fourth grade students from Kingston took part in our Day in the Life program. Over eight seine hauls we caught 28 fish, most notably an Oriental weatherfish and a northern pipefish. The water temp was 61° F [16° C]. Lunch was accompanied by music and a bald eagle resting on a bare branch in perfect sight of our spotting scope.

- Eli Schloss, Donna Nageli, Eric Nageli



*Inspiration from Quiet Cove*

**Quiet Cove, Poughkeepsie, RM 78:** Here are some descriptions of the day in the students' own words.

- Skip Hoover and the G. W. Krieger Elementary School's 4th and 5th grades

"At the looking deeper station we got to go in the river. We had to put on waders. Waders are like boots attached to waterproof pants. We went in the river to collect mud samples. The waders squished you when you go above your feet. We collected the samples to analyze it. The mud that my group collected felt squishy with little rocks - it was black/brown. It smelt gross." Joshua.

"In station 2 the river miles was 78, Latitude 41.44° N, Longitude 73.56°. The river was going from north to south. Then we threw an orange in the river - it took 47 seconds for it to travel 30 meters. We wrote about what we saw, heard, and smelled." Adriana Hernandez.

"In the third station we went to Mr. Bob [Adams of DEC's Hudson River Fisheries Unit]. They caught two spottail shiners and one killifish. The spottail shiner was 7.5 cm and the killifish was 5 cm. We analyzed to find out what fish they were. At the end we held the spottail shiner. I held it and kissed it." Natasha Neet.



*Identifying a spottail shiner*

"...The Chemical River. At this station we took water samples to measure the levels of the different chemicals in the river. The water temperature (degrees Celsius) was 15° C [59° F]., the Dissolved oxygen (in ppm) was 4 ppm, the pH (scale 0-14) was 7.5 pH, the nitrates (in ppm) was less than 5 ppm, and the phosphates (in ppm) was 2 ppm." Jordan Rosbonough.

**Bob Shepard Park, Highland, RM 76:** Bob Shepard Park is a new access site still under development in the Village of Highland, Town of Lloyd. An enthusiastic bunch from Highland Middle School was equipped with secchi disks and other equipment to test the waters. The mouth of the Twaftskill Creek at the north end of the park affords an excellent spot for seining and river shore access at a site otherwise defined by its vertical bulkhead and deep water dock. A good-sized catfish was one of only two fish caught here today.

- Nancy Beard, Hudson River Estuary Program, NYSDEC

**Mid-Hudson Children's Museum, Poughkeepsie RM 76:** Sturgeon, sunfish, and estuary are just a few of the exciting new words preschoolers visiting the Mid-Hudson Children's Museum learned today. The children from the Poughkeepsie Day Nursey started the day by acting like scientists and observing their surroundings. Water! Trees! Birds! Train! We learned a little bit about the sturgeon and even had a chance to feel the rough scales or "scutes" which cover their bodies. I brought along a very special guest as well, a baby sunfish caught from the Hudson River. We all had a chance to take a close look and the children were quick to identify important parts of the body like fins, tail, eyes, and gills. We spent the rest of the afternoon doing nature crafts and playing with life-size eel, fish, and sturgeon stuffed animals. You are never too young to appreciate nature.

- Christina Tobitsch



*Pre-schoolers look out at the Hudson in Poughkeepsie*

**Waryas Park, Poughkeepsie, RM 76:** It was chillier than we anticipated and many of the kids were quite cold. We tried 12-15 seining sweeps over two hours in two locations - off the boat ramp and the "beach" below the south dock. We came up empty, except for one crab two centimeters across! It was hard to get more than a step or two beyond the submerged concrete of the boat launch since after that top of the net was entirely underwater - the river seemed high. We did catch a bicycle at the spot south of the south dock - a highlight for the kids.

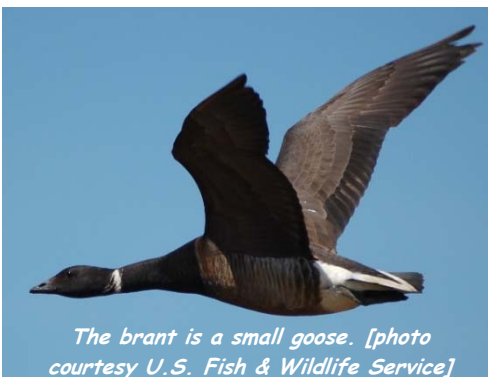
- Brian Reid, Poughkeepsie Day School

**Kowawese, New Windsor, RM 59:** Students from Vails Gate Elementary and Bishop Dunn Memorial helped us sample the river. In an elegant backdrop, a kettle of turkey vultures spiraled up out of the forest from their night roost. The sandy shallows lacked vegetation, so we had to seine hard to find fish. Our catch was modest; highlights included a smallmouth bass 200 millimeters [mm] long, American shad a year old (110-113 mm), a young-of-the-year striped bass (63 mm), and penny-sized blue crabs. Oddly, salinity rose as the tide fell, from 2.25 to 2.50 parts per thousand [ppt]. Water temperature was 65° F [18.3° C].

- Mary-Lynne Malone, Joe DeStefano, Jack Caldwell, Bernadette Kleister, Pam Golben, Tom Lake



*Young American shad*



*The brant is a small goose. [photo courtesy U.S. Fish & Wildlife Service]*

**Cornwall Landing, Cornwall-on-Hudson, RM 57:** Seventy-five students from Willow Avenue School in Cornwall lined the beach in eager anticipation as we seined a quiet bay in the dropping tide. As we began, an immature bald eagle made a brief appearance overhead. As at Kowawese, two miles upriver, we caught yearling alewives 110-111 mm long. The visual highlight was a gorgeous redbreast sunfish - no tropical fish ever looked prettier. Salinity was 2.5 ppt and the river was 66° F [18.8° C]. As our program neared lunchtime, a long skein of brant (35-40 birds) passed low overhead, made the turn at the base of Storm King Mountain, and then flew straight down the river.

- Chris O'Sullivan, Tom Lake

**Riverfront Green, Peekskill, RM 43:** Students from Walter Panas High School were intrigued by seining and the fish they caught. They used two different seine nets - a 20 footer and a 60 footer - running the larger one three times and the smaller four times. The 20 footer was more successful. They caught five American shad (largest 7.5 cm), two white perch (largest 16 cm), 16 striped bass (largest 12 cm), one spottail shiner and one Atlantic silverside. This was the southernmost site at which spottail shiner was caught during this Day in the Life, and the northernmost site for Atlantic silverside.

- Rebecca Houser

**Steamboat Dock, Verplanck, RM 41 :** Thirty five students from Mahopac High School happily seined without wearing waders - some of them up to their shoulders in the river, enjoying the 71° F [21.7° C] water - warm compared to the drizzly cold air. They caught white perch, striped bass, comb jellies, and a very large and aggressive male blue crab.

- Rebecca Houser



*Adult blue crab netted at Verplanck*



*Hogchoker netted at George's Island*

**George's Island Park, Montrose , RM 39.5:** I arrived here to find students from Pocantico Hills School seining, testing the water for DO, and carefully observing the black and white circle in the turbidity tube. The catch of the day was the biggest hogchoker I have seen - five inches long - almost as big as my palm!

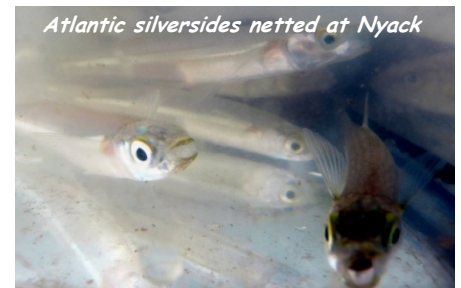
- Rebecca Houser

**Croton Point Park, Croton-on-Hudson, HRM 35:** My early morning started at Croton Point Park with over 100 sixth graders from Pierre Van Cortlandt Middle School. The river was calm and quiet, the weather drizzly and cool. Students were busy observing, testing the water, and looking for anything they could fit into their nets. They were excitedly digging in the sand with hand tools, looking for anything they could collect and show each other. We caught no fish, but - to our surprise - loads and loads of comb jellies. Observing the jellies moving around in the tanks was thrilling to them as it was to me.

- Rebecca Houser

**Nyack Memorial Park, HRM 28:** The day was cold and drizzly but the Upper Nyack Elementary students ventured out on a walking field trip to the park to learn about the Hudson River. Nyack High School students were sampling in the same location and handled the fish catch. Several estuarine species were pulled in via seine net, fish trap, and crab traps. The elementary school students identified an adult female blue crab and juvenile Atlantic silverside using the dichotomous key. Other species included bay anchovy, white perch, striped bass (juvenile), ghost shrimp, and ctenophores. Almost as exciting as the fish was the tide station where students watched the incoming tide swallow the sand block tide markers, towing them back into the Hudson!

- Nicole Liable and Rockland County AmeriCorps staff with Upper Nyack Elementary School 3rd graders



*Atlantic silversides netted at Nyack*



*A comb jelly (ctenophore)*

*Karl Van Ginderdeuren/  
World Register of Marine Species*

**Piermont Pier, Piermont, RM 25W:** Approximately 80 high school students and their teachers ignored the cold and drizzle, engrossed in studying the Hudson River today. Like doctors with a patient they checked its temperature, respiration, chemistry, and nutrients. Salinity hovered around 9 ppt, temperature around 18° C [64.4° F]. Oxygen levels rose to 7.5 mg/L during our visit. While the group was disappointed in the low numbers of fish in our nets, there was excitement over some of the catch: a mummichog 10 cm long and cigar-sized in width, several nickel-sized blue crabs, five small naked gobies that sought refuge in our traps, and several hundred ctenophores that were either scooped into the nets or lined the bottom of our traps. Additionally, we caught just a handful of Atlantic silversides (we normally net dozens or more), a few bay anchovies, striped bass, and a couple of white perch.

- Margie Turrin & the Lamont-Doherty team, with Pearl River, Clarkstown South & Tappan Zee High Schools

**69th Street Pier, Riverside Park South, Manhattan, RM 5:** The tossing of the orange to measure currents was an awesome example of a discrepant event. The wind was pretty strong and its effects were very evident on the river's surface. All of the students predicted that the orange would be pushed swiftly by the wind. They were amazed when the orange simply sat in place for a very long time. I don't think I have ever done this with a group when the current was right smack dab at slack. In this moment they really saw the complexity of water column movements and got that wave direction and current direction were two different things. Students caught one fish that they proudly and accurately identified (all by themselves, using the Clearwater key) as a 3" cunner. Students did not keep track of the number of times that they retrieved the traps. They were way too excited about the crabs and fish that they caught. These students had never had this type of experience before and were overwhelmed by hauling up such beautiful animals. They were quite skeptical that they would catch anything, let alone such interesting creatures. Large numbers of comb jellies - at least 50 - ended up in the minnow traps. The students were fascinated with these animals as well, but the blue crabs stole the show! The students fell in love with them.

- Kimberly Schwab and Speyer Legacy School students

**Sherman Creek/Swindler Cove, Harlem River, Manhattan:** Day in the Life winds down with a late afternoon visit to Sherman Creek and Swindler Cove by Obed Fulcar's M.S. 319 middle schoolers from the Friends of Sherman Creek. Work has begun to improve access and landscaping at Sherman Creek, so the group detoured to the beach at Swindler Cove. There we netted 32 Atlantic silversides, 12 blue crabs, and lots of ctenophores. As we left the site, a great blue heron flew huge and low over our heads.

- Steve Stanne, Obed Fulcar, Friends of Sherman Creek



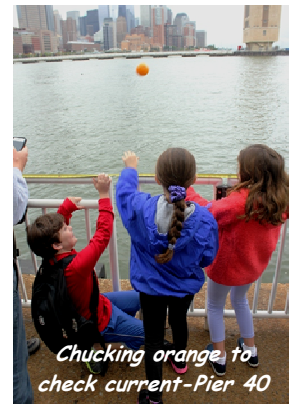
*P.S. 3 students with pH strips*

**Pier 45, Hudson River Park, Manhattan:** Shino Tanikawa of the NYC Soil and Water Conservation District works with some of the youngest students to participate in Day in the Life - kindergarteners from P.S. 3 in Manhattan. Their focus, attention to detail, and delight in being on the pier is always inspiring, not to mention their array of colorful rain boots on a drizzly morning! Students were bursting with excitement as Shino demonstrated the density of the river with a hydrometer to measure salinity (21.8 ppt). They could hardly wait to dip their own individual pH strips in the water.

- Chris Bowser

**Pier 40, Hudson River Park, Manhattan:** The Trevor Day School third graders could barely wait to get started! Vanessa rang a soft chime to get everyone focused so that River Project educator Chris Anderson could get them started. Once in groups, the students examined water quality, determined river currents, and checked out a great display of live oysters cleaning the harbor water before their eyes. Salinity was 21 ppt, perfect for the striped bass and flounder that had been caught there earlier.

- Chris Bowser



*Chuckling orange to check current-Pier 40*

**Hunts Point Riverside Park, Bronx River, The Bronx:** One of the last groups to sample today was Rocking the Boat. Here, local teenagers construct their own wooden boats each semester, and use their fleet to monitor water quality on the tidal Bronx River. In some ways, today was just another day of routine stewardship. I was lucky to be in Janet and Diamond's boat. They rowed surely and steadily, past a concrete plant re-purposed as the centerpiece of a park, under a bridge, and up to a small tract of vegetated shoreline, where other crews were measuring turbidity, DO, and nutrients. We rowed back at sunset, singing sea shanties and reflecting on a very good, very long Day in the Life of the Hudson and the waterways to which it is connected.

- Chris Bowser



*Rocking the Boat participants check water quality from boats they've built*

<<<<< **ABOUT A DAY IN THE LIFE OF THE HUDSON RIVER** >>>>>

"A Day in the Life of the Hudson River" is organized by DEC's Hudson River Estuary Program, with assistance from the Lamont-Doherty Earth Observatory of Columbia University. The event is held in conjunction with National Estuaries Day, which celebrates these remarkably productive and valuable ecosystems. Many environmental education centers along the river join in the effort, partnering with classroom teachers to help students better understand their local piece of the Hudson and then share their experiences and data to gain wider perspective on the entire ecosystem. For more information about "A Day in the Life," visit <http://www.ldeo.columbia.edu/edu/k12/snapshotday>.

<<<<< **HUDSON RIVER MILES** >>>>>

The Hudson is measured north from Hudson River Mile 0 at the Battery at the southern tip of Manhattan. The George Washington Bridge is at HRM 12, the Tappan Zee 28, Bear Mountain 47, Beacon-Newburgh 62, Mid-Hudson 75, Kingston-Rhinecliff 95, Rip Van Winkle 114, and the Federal Dam at Troy, the head of tidewater, at 153.

<<<<< **TO CONTRIBUTE YOUR OBSERVATIONS OR TO SUBSCRIBE** >>>>>

The regular Hudson River Almanac is compiled and edited by Tom Lake and emailed weekly by Steve Stanne of DEC's Hudson River Estuary Program. Share your observations by e-mailing them to [trlake7@aol.com](mailto:trlake7@aol.com). To subscribe to the Almanac, go to <https://public.govdelivery.com/accounts/NYSDEC/subscriber/new>, enter your email address, and click on "Submit." A page listing available subscription topics will appear. Scroll down; under the heading "Natural Areas and Wildlife" is the section "Lakes and Rivers" with a listing for the Hudson River Almanac. Click on the check box to subscribe. While there, you may wish to subscribe to RiverNet, which covers projects, events and actions related to the Hudson and its watershed, or to other DEC newsletters and information feeds.



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Information about the Hudson River Estuary Program is available on DEC's website at <http://www.dec.ny.gov/lands/4920.html>