Creative Non-Fiction Essay
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**Canoeing through History: Wild Encounters on Bubbly Creek**

It's hard for me to think of a waterway more forgotten or forlorn than the South Fork of the South Branch of the Chicago River. Such a convoluted name would seem to doom any stream to perpetual obscurity, and indeed the South Fork is very easy to overlook. Even though the South Fork is crossed by the Orange Line elevated train, Interstate 55, and some busy city streets in Chicago's Bridgeport neighborhood, travelers on the southwest side of Chicago might go years without ever taking more than a passing glance at this low-profile tributary of the city's namesake river. That's unfortunate, because the South Fork is one of the best places to think about nature in Chicago: what it is, how it's changed, why we should care about it, how we can make it better.

This industrialized and heavily polluted channel has another, much more evocative name: Bubbly Creek. That half-affectionate, half-insulting moniker bestowed upon it in the nineteenth century refers to the methane gas that bubbles up from the anaerobic bacterial decomposition of organic wastes that now largely constitute the creek's sediments. Decade upon decade, from the mid-1800s onward, Bubbly Creek was the notorious dumping ground for the sprawling animal processing factory known as the Chicago Stockyards.

Waste products from the industrial deconstructions of cow, pig, and sheep carcasses were unceremoniously dumped into the headwaters of Bubbly Creek, a dredged-out channel of which ran along the Stockyards' northern boundary. Every day, obscene volumes of blood, offal, hair, and chemical waste from the meatpacking plants poured into the sluggish current of the creek, soon rendering it so befouled that any further objection to its continued pollution and abuse must have seemed pointless. Things became so bad that in

1911 a chicken was photographed walking across the sludgy surface of the river. Another photograph from around the same time shows a city inspector in a suit, topcoat, and bowler hat as he strode upon a fetid island of muck along one stretch of the creek, surveying the harrowing landscape as if he were picking his way through a disaster area.

The industrial desecration of Bubbly Creek was perpetrated in the patently false belief that the slow-moving current would simply wash the filth downstream—an attitude that was applied with equal enthusiasm to the Chicago River (and other urban waterways) in general. This once meandering and biologically rich waterway thus became a *de facto* sewer for the residential, commercial, and industrial waste exuded from the metabolic activity of a fast-growing city. Although the Stockyards have been closed since 1971—over forty years now—the legacy of environmental abuse is readily apparent in Bubbly Creek today, and visitors can still watch the water bubble up as methane and hydrogen sulfide escape from the dark brown depths of the otherwise mostly calm waters.

These gaseous emissions are only one indicator of the creek's compromised ecology. Here on Chicago's Near Southwest Side, where the frame houses and industrial buildings of the Bridgeport, McKinley Park, and Pilsen neighborhoods converge, the once-extensive wetlands that surrounded Bubbly Creek were long ago filled and paved over. The Creek itself, once teeming with all manner of plankton, invertebrates, fish, birds, and mammals, is now a dredged and channelized canal with harsh angles and sheer vertical embankments of broken concrete or rusted steel. Life here is difficult for just about any organism except the anaerobic bacteria that teem in the creek's long-polluted sediments. Except for one hardscrabble and graffiti-tagged city park at its mouth, the Creek has no place along its banks that is fit for direct or pleasant human access to the water.

And yet, I can't deny it: this is why I love Bubbly Creek. Its ugliness, its monumental bad luck, and its perpetual sickness from so long and intense a period of mistreatment have done more than earn my sympathies. They've convinced me that Bubbly Creek, and places like it, are also potential sites for contact with wildlife and renewal of spirit—especially for urban citizens who may be plagued by a fundamental disconnection from the nonhuman world around them. Healing nearly ruined landscapes like the watershed of Bubbly Creek involves the reconnection of city folk to water, land, and the organisms that call our urban waterways home.

The best way to start such a journey? A canoe trip on Bubbly Creek.

**Setting Forth**

My initial encounter with Bubbly Creek was also the first time I had traveled on the Chicago River in anything other than a large tour boat. I had long wanted an excuse to have a more intimate experience with these complicated waters; it just took a while to find the right time and place. The occasion turned out to be the capstone field trip of an experimental "Sustainable City" seminar I first taught in the spring semester of 2009 as a professor at Roosevelt University.

To pull off the complicated logistics of taking my Roosevelt students out on the river, I partnered with the environmental organization Friends of the Chicago River (and have done so ever since on subsequent trips). Formed in the late 1970s, the Friends promote river conservation, provide educational opportunities for K-12 students and teachers, and run canoe trips on various stretches of the river throughout and beyond the city limits. Their corps of trained volunteer guides not only know the river's history and geography like the veins on the backs of their hands, but also are skilled in coaching novice paddlers about proper technique and safety protocol.

Thus it was that my students, a few colleagues, and I met up with the Friends of the Chicago River on the first of May at the mouth of Bubbly Creek in Bridgeport. "We're really excited to be doing the Creek again," enthused Dave, a veteran guide and our trip leader. "We haven't been on this part of the river for, what, ten years? Yeah, about that. Someone on that trip spotted a dead body in the water. That was kind of traumatic, as you might imagine. So it seems we haven't been back until now. Long time coming—this is a good stretch of the river to explore."

A speech like that was not necessarily a surefire way to inspire confidence in and relax a gaggle of nervous paddlers, especially since several of them were middle-aged African-American women who had never stepped foot in a canoe, let alone gotten within sniffing distance of the likes of Bubbly Creek. But Dave was funny as well as encouraging in his subsequent remarks on the art and pleasures of canoeing this historic stretch of river; and to the credit of my students, they proceeded with our plan, a bit nervous but undaunted. Thus fortified with paddles, life-jackets, and newly-acquired expertise, we divided up two per canoe, decided within our pairs who should take the stern and bow, and ventured forth on the water.

Our launch site was a small dock jutting out from the eastern shoreline of the South Turning Basin, one of two dredged-out and widened sections of the river that allow larger ships and barges to turn around and reverse course. This is the mouth of Bubbly Creek, where it meets the South Branch of the Chicago River that flows from the northeast. The conjoined streams become the aptly named Sanitary and Ship Canal, which continues southwest through and beyond the city. The open expanse of water here provided us with a panoramic view of the steel bridges, boat slips, warehouses, factories, smokestacks, houses, and churches of the Bridgeport and Pilsen neighborhoods. Most impressively, the Chicago skyline loomed large to the northeast of us, only three or so miles distant, reminding us that we were in the heart of a vast and sprawling metropolis.

Despite these visually compelling surroundings, though, our attention was immediately focused on the water and our canoes. The day was windy, and the breadth of the Turning Basin provided the west wind sufficient fetch to raise a chop on the water. But once we settled into a quiet paddling rhythm, we began scanning the water and the shoreline for movement, trying to peer through the reflective glare of the water's surface to see into the depths below, listening for the beating of wings overhead. At first the traffic noise from nearby Ashland Avenue and Interstate 55 made it challenging to hear such muted sounds.

But as we venture upstream and get out of the wind, the landscape quieted down. We began to hear the river as well as see it.

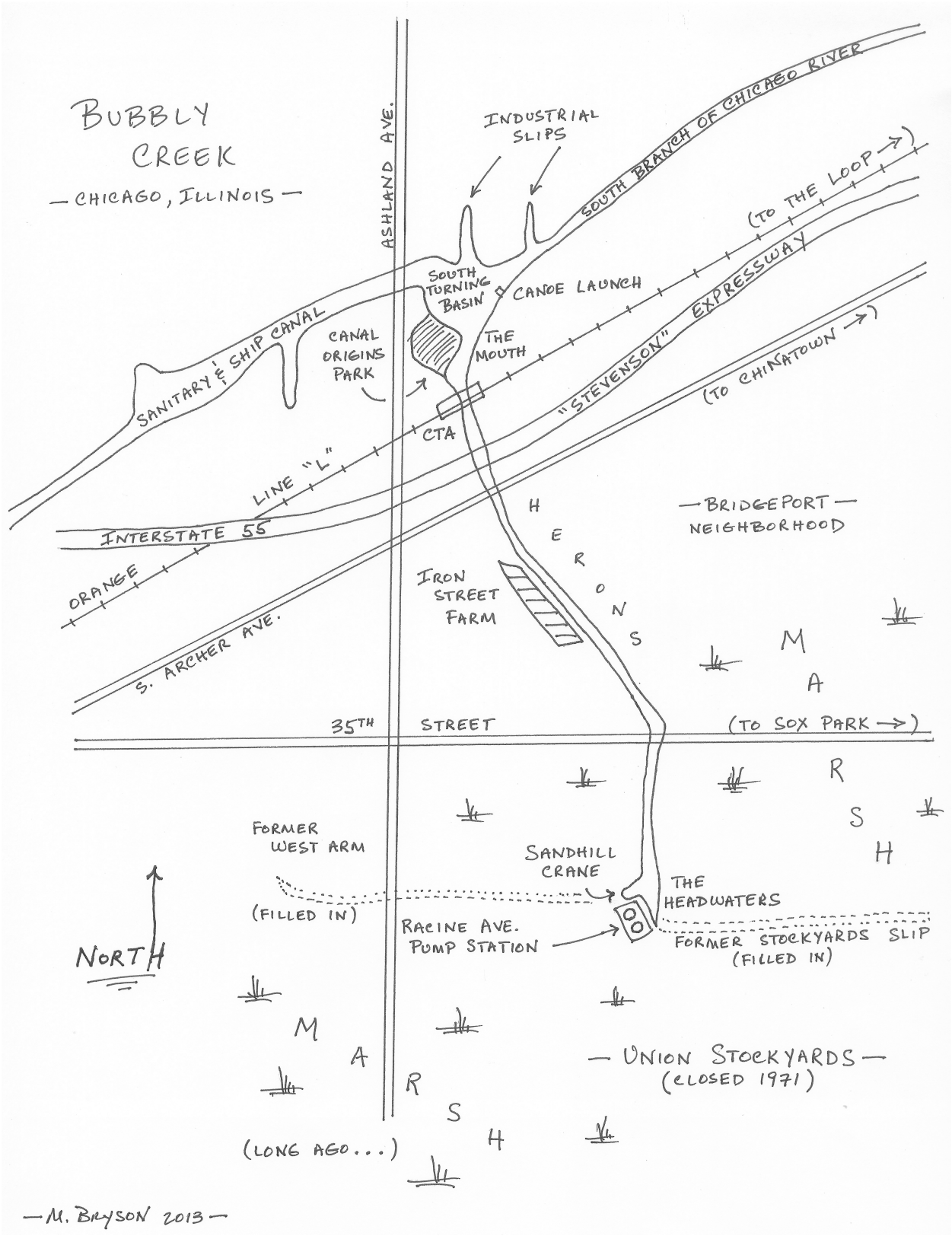
**Encountering the Wild**

The view from just above Bubbly Creek's waterline was one of arresting images and stark contrasts. Along some stretches, vegetation reclaimed the industrial riverbank. Elsewhere, pipes stuck out from concrete or steel embankments, water from street-level drains trickling from their openings. We floated slowly and quietly under massive railroad and highway bridges, the dim roar of traffic far above us.

Visible evidence of pollution was everywhere—old plastic garbage bags hanging from trees; floating bottles and cans; the occasional used condom (nicknamed "Chicago River Whitefish" by jaded river veterans); and yes, the infamous bubbles, still percolating up from the murky depths. At times the faint stench of sewage drifted over us—confirmation of the Combined Sewage Overflow events that in times of sufficient precipitation release untreated sewage into Bubbly Creek from seven different outlets, all of which are gaping drain holes in the vertical concrete wall of the river. These are labeled with large, official, and somewhat ominous signs from the Metropolitan Water Reclamation District of Greater Chicagoland, a bureaucratic discourse which warns that the river's water level can rise rapidly and substantially in the event of a sewage overflow. As it turns out, these happen several times a year.

Yet, we also encountered abundant wildlife along the Creek, especially birds—Canada geese, Mallard ducks, a juvenile red-tailed hawk. Tree swallows swooped over the water, hunting for insects, and red-winged blackbirds and white-throated sparrows sang lustily from the brush riverbanks. That first trip on Bubbly Creek featured what was for me a most gratifying avian trifecta, as my students and I spotted three charismatic heron species native to the Chicago region—the great blue heron, the green heron, and the black-crowned night heron. These birds were clearly at home here, flying along the concrete riverbanks, poking around the litter-strewn mud banks of one of the quasi-naturalized stretches south of the I-55 bridge, and hunting for fish in this long-channelized waterway whose sediments are laced with PCBs and layered with half-decomposed effluvia from Chicago's aging sewer system.

In my thirteen years of living in Chicago at that point, that was the first time I had ever seen all three of these beautiful herons in one place at the same time. Veteran birders have since disabused me of my shock. It turns out that these species are often spotted along the North and South Branches of the river, and other heron species (such as the great egret and least bittern) are seen less commonly, yet regularly. But at the time, it strikes me as delightfully ironic that I had needed to come to Bubbly Creek, of all places, to see for myself. More importantly, the herons teach us by their mere presence about the capacity of this forlorn and mostly forgotten section of the river to surprise and inspire its human visitors with quiet glimpses of the nonhuman wild. They also are tangible signs of the partial biological comeback of the river that began in the 1970s, as well as harbingers of future restoration efforts that could further improve water quality and expand shoreline habitat.


BUBBLY CREEK
— CHICAGO, ILLINOIS —
ASHLAND AVE.
INDUSTRIAL SLIPS
SOUTH BRANCH OF CHICAGO RIVER
(TO THE LOOP →)
SOUTH TURNING BASIN
CANOE LAUNCH
SANITARY & SHIP CANAL
CANAL ORIGINS PARK
THE MOUTH
"STEVENSON" EXPRESSWAY
(TO CHINATOWN →)
CTA
LINE "L"
INTERSTATE 55
ORANGE
S. ARCHER AVE.
H E R O N S
— BRIDGEPORT — NEIGHBORHOOD
IRON STREET FARM
M A R S H
35TH STREET
(TO SOX PARK →)
FORMER WEST ARM
(FILLED IN)
SANDHILL CRANE
THE HEADWATERS
RACINE AVE. PUMP STATION
FORMER STOCKYARDS SLIP (FILLED IN)
NORTH
M A R S H
(LONG AGO...)
— UNION STOCKYARDS — (CLOSED 1971)
— M. BRYSON 2013 —

Although we didn't see any in our Bubbly Creek journey that day, beavers are known to be active in Chicago's waterways, despite their degraded and developed state. Chewed-upon trees along the riverbank on the North Branch and even here, on Bubbly Creek, testify to their presence. And below us undoubtedly swam many common carp (*Cyprinus carpio*), longtime invasive residents who are remarkably tolerant of pollution and muck about in the bottom sediments for food. Bubbly Creek's sediments, water column, and shoreline thus constitute a biologically challenging urban wilderness in which plants and animals eke out survival amidst toxic sediments, turbid waters, and ribbon-thin riparian zones. All species up and down the food chain, from the native herons to the invasive carp, share the fate of having heavy metals and PCBs bioaccumulate in their tissues.

But this doesn't stop people from fishing in the Chicago River, even on Bubbly Creek. Canal Origins Park, a small city greenspace located across from our canoe launch at the mouth of Bubbly Creek, is a popular fishing spot. Catch-and-release is the officially sanctioned recreational activity here, for obvious health reasons. But many folks, particularly those struggling at the bottom of the socioeconomic food chain, eat what they catch, whether out of ecological ignorance or just plain disregard of the risks of doing so. This reality is a reminder of how hunger can trump caution, as well as how Chicago residents are an inextricable part of Bubbly Creek's ecosystem.

**Reaching the Headwaters**

It took us about an hour of quiet but steady paddling to travel Bubbly Creek's one-and-a-quarter-mile length. Along the way, my mind began to drift backward through time, slipping between the past and present. I found it exceedingly difficult to visualize what this part of the Chicago River's watershed once looked like. Technology, human ingenuity, and brute force have profoundly changed the relation here among water, land, and wildlife.

In its preindustrial state, Bubbly Creek was a small and beautiful wetland stream that teemed with wildlife and moseyed through approximately five square miles of marshland and wet prairie. Early voyageurs would have encountered dozens of species of birds, mammals, fish, amphibians, and invertebrates in a journey through this wetland wilderness only a few miles downstream from the modest frontier outpost of Chicago.

The once-meandering channel of Bubbly Creek was long ago straightened and dredged. In the process, the wide riparian zone and marshy floodplain were replaced by an abrupt border of corrugated steel, concrete walls, and/or gravelly, rubbly riprap. In some stretches the riverbank is a sheer wall rising eight feet or more from the water's surface; in others, a pitifully narrow band of vegetation clings to the steep, erosion-prone slopes that lead upward to street level within the surrounding residential and industrial neighborhoods. Human access to the water is difficult, if not impossible. Willows, maples, trees of heaven, cottonwoods, and a scrappy miscellany of shrubs take root here, tenaciously providing a thin but welcome stretch of green along much of the Creek's length.

This part of metropolitan Chicago has for decades been an endless grayscape of concrete, houses and apartments, factories and industrial sites. Under the streets, which were built

initially at ground level and then raised in the mid-nineteenth century to make room for the city's sewer system, a sprawling and mind-bogglingly complex network of pipes that collects street runoff and sewage from a vast thirty-square-mile area on Chicago's South Side. Where once rainwater filtered through the marshlands and fed the groundwater in Bubbly Creek's watershed, now it hit roofs and pavement before traveling through this man-made drainage system of pipes, most of which are invisible, but a few of which protrude abruptly from the banks of the Creek.

Legs cramped, backs stiff, we stretched our limbs here at the halfway point of our voyage, being careful not to flip our canoes in the process. This is one of the best places to contemplate the profound physical changes imposed upon the Chicago River: the headwaters of Bubbly Creek—now a literal dead-end at a massive piece of urban water infrastructure, the Racine Avenue Pumping Station, an imposing concrete-and-steel edifice that dwarfs our canoes and intimidates first-time visitors. These huge pumps that have operated since the 1930s take all that runoff that flows into Bubbly Creek and send it a few miles southwest to the Reclamation District's gigantic 570-acre Stickney Wastewater Treatment Plant. In times of moderate to heavy rainfall, the pumps reverse, flushing stormwater runoff, untreated sewage, and trashy flotsam into the still waters of Bubbly Creek, temporarily raising its water level several feet.

In our canoes we felt small and vulnerable. Shying away from the five-foot-diameter intake/outflow pipes of the Pumping Station, we scraped the aluminum skins of our boats against the concrete embankment of the opposite bank. The collision inspired us to look up, and we noticed the waterline stains that testify to the upper reaches of Bubbly Creek's modern flow regime.

Here at the headwaters with my students, our Friends of the Chicago River guides "rafted up" our canoes so that we could discuss the relationship of wastewater—what we flush down our toilets and let flow down our sinks—to the biota and ecology of urban waterways. Such a topic packed a considerable punch while floating in the heavy shadow of the world's largest wastewater pumping station. Then, we grabbed our paddles and headed back downstream, retracing our water pathway, seeking the river's mouth once more -- but with a new perspective on the water flowing beneath our hulls.

**Contemplating Cranes**

It was at the outset of our return leg that we spotted a sandhill crane, wading slowly and silently through the shallows of a wide part of the river where the West Arm of Bubbly Creek used to flow through a lush marshland of cattail and pickerel weed. Unlike the other bird species I've seen repeatedly along the Creek in the last five years, I've encountered the sandhill just this once.

It stepped gingerly on long legs through the sediment . . . pausing . . . poking a dagger-like beak into the mud . . . then taking more slow steps. We floated for a long time in the non-current of the stream, murmuring low sounds of appreciation and awe, and scanning the

sky in case other cranes were up and about. Most of my students had never before seen or heard a sandhill crane. They were, in a word, impressed.

Here in the middle of America's third-biggest city, the sight of a gray-winged, rusty-bellied sandhill fishing on the margins of Bubbly Creek is a link to the wild past of this once-wetland and a harbinger of its potential future as a restored urban stream. *Grus canadensis* stands over three feet tall and has a dazzling wingspan of up to seven feet; for me, its unmistakable bugling gargle of a call brings compelling memories of my childhood visits to the North Woods, where I first encountered these birds at Seney National Wildlife Refuge in Michigan's Upper Peninsula. The great writer and conservationist Aldo Leopold wrote in his *Sand County Almanac* that "our appreciation of the crane grows with the slow unraveling of earthly history. His tribe, we now know, stems out of the remote Eocene. . . . When we hear his call we hear no mere bird. We hear the trumpet in the orchestra of evolution. He is the symbol of our untamable past, of that incredible sweep of millennia which underlies and conditions the daily affairs of birds and men" (p. 96).

This kind of moment—one in which city dwellers can have an intimate encounter with a primeval species like the sandhill crane in a quiet urban wilderness, a place so foreign to the setting of our daily lives—bespeaks both the undeniable magic of the crane and the profound sense of hope I have for Bubbly Creek. As a site of ecological restoration, even the U.S. Army Corps of Engineers in their detailed studies of the Creek admits its revitalization and recuperation are not technical impossibilities, but merely matters of sufficient time, money, and public will.

Until that day comes when sewage is no longer pumped into the river's channel and wetlands once again line its margins, Bubbly Creek will remain a damaged yet still wondrous place to viscerally plumb the depths of Chicago's environmental history and make contact with a surprising cast of nonhuman city creatures. With birds of such physical stature and symbolic import as cranes calling Bubbly Creek home, even if only briefly on their north-south migrations, what other marvels might we see if we remediate and restore these damaged riverscapes?

## Recommended Resources

*Books*

Daniel, Eddee. *Urban Wilderness: Exploring a Metropolitan Watershed*. Chicago: University of Chicago Press, 2008.

Hill, Libby. *The Chicago River: A Natural and Unnatural History*. Chicago: Lake Claremont Press, 2000.

Leopold, Aldo. "Marshland Elegy." In *A Sand County Almanac and Sketches Here and There,* 95-101. New York: Oxford University Press, 1949.

*Web Sites*

Bryson, Michael A. "Paddling Bubbly Creek: Water, Food, and Urban Ecology." 2 May 2012. sites.roosevelt.edu/mbryson/2012/05/02/paddling-bubbly-creek-water-food-and-urban-ecology

Friends of the Chicago River.
www.chicagoriver.org

Openlands: Northeastern Illinois Regional Water Trails.
www.openlands.org/northeastern-illinois-regional-water-trails