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# Flushing Bay - A forgotten waterfront and a missed opportunity

By **Guglielmo Mattioli** | December 28, 2016

Every time there is a Mets game, more than 40,000 people pour into Citi Field Stadium in Flushing, Queens. Of those 40,000 just a handful are probably aware that the Mets home is 10 minutes away from Flushing Bay and its World Marina and promenade, a two-mile stretch of waterfront between La Guardia Airport and Willets Point.

After all, the bay's heavily polluted water, the need to cross under an eight lane highway to get there and the presence of few businesses on its shoreline make of that waterfront anything but attractive. But some can see the lost potential in its waters.

“Flushing Bay waterfront is a huge lost opportunity” says Sean Dixon an environmental attorney from Riverkeeper, a nonprofit organization whose mission is to protect the environmental, recreational and commercial integrity of the Hudson River and its tributaries.

“There are a million people in this city who would love to have access to the water,” Dixon adds. “It's an equality issue.”

Access to the water at its basic level means that people can easily and reach the waterfront. Complete access implies people can also touch the water, use it: fish in it, sail and kayak in it and, ultimately, swim in it.

Such access is important because it creates recreational opportunities and public spaces open that improve the quality of life of residents, advocates say.

The Flushing Bay Marina was built as part of the 1939 and then again as part of 1964 World Fair as the grand water gateway to the exhibition ground. The promenade was completed in the 80s with the goal to provide visual access to the bay, but throughout the years it became less and less important as bayside development increasingly looked inward and pollution in the bay increased.

Shoreline factories of all sorts closing off the waterfront, coupled with a combined sewer system that overflows in the bay when it heavily rains or snow, made Flushing Bay one of the most polluted bodies of water in the city. The bay each year receives more than 2 billion gallons of untreated stormwater and combined sewer overflow from nine different outfall points

According to local residents, on some days during the summer, people driving on the highway along the bay and above Flushing Creek, its tributary, have to close their car window because of the smell rising from the water below.

“It’s like if the city doesn’t want to get involved and take responsibility for all this water. There is a lot of red tape, they don’t want the liability,” says Randy Ng, coach of DCH Racing, a dragon boat team that trains in Flushing Bay and knows how polluted the water is out of personal experience. “Some days we paddle and it’s full of condoms and women-hygiene products.”

To reduce Combined Sewer Overflow, storm water runoffs and remove toxic sediments from the bay’s bed, the city is preparing a Long Term Control Plan, that aims to restore the water to acceptable levels.

An LTCP is a planning tool that outlines the actions the city is going to take to clean up a polluted waterbody. Currently the city has to submit to the state 10 LTCPs for 10 different water bodies, plus a City Wide Plan. These plans take years to be prepared and when ready have to be approved by the state, which determines if the city's actions are effective enough to meet the standards set in the federal Clean Water Act of 1972.

Flushing Bay final LTCP should be submitted to the State of New York by December 30. The city's LTCP plans with all their flaws, will be effective in years and in the meantime little is changing at a smaller scale. During an October meeting on Flushing Bay LTCP, residents and environmentalists were impressed by the city will to invest billions in new new gray infrastructure but disappointed to find out that more wasn't being done to enhance green infrastructure or capture "floatables" like empty soda bottles that bob across the bay.

Groups like Riverkeeper sometimes take issue with the clean-up proposals embodied in the LTCPs. The deeper problem, advocates say, is that as in other control plans it has prepared, the city looks at the bay just as an environmental issue, and not as a place where it wants more people to get closer to the water, let alone use it for fishing or swimming. There is no public event or programing meant to draw more people along the bay shore. When it comes to urban design, just a small sign close to Citi Field indicates the direction toward the Marina but the sidewalk for pedestrians meanders in a way that makes for an uncertain walk, and the highway underpass is bleak as it could be. Two quite interesting [structures](#) from the World Fair of 1964 stand right in front of the main pier completely abandoned. Also the main pier recently closed for capital improvements, it will take three to four years to repair. Pier number two has been unusable for years now because of the adjacent CSO outfall. Although the Flushing Bay LTCP in one way is impressive –among the alternatives to reduce CSO, the city proposed a 2 billion dollar [tunnel](#) that would divert water from the bay to a few sites west and achieve 100% CSO reduction– there is no plan to

to bring people to the water. At the October LTCP meeting, there was no discussion on this topic as if the city was doing all of this just to meet State requirement.

One problem is that is very little emphasis is given to access and integrated planning. “The Department of City Planning doesn’t call Department of Environmental Protection when it comes to new zoning,” says Dixon. Nor does the DEP work closely with the planning department when it’s starting a new LTCP, making the plans less sustainable and effective.

A great example of this lack of integration is what’s happening in close by [Willets Point](#), an isthmus of land surrounded by Flushing Bay and Flushing Creek. Here a redevelopment worth three to four billion dollars is transforming car repairs, scrap yards and waste treatment facilities into a mixed use neighborhood with residences and a shopping mall. But despite being surrounded by water, the masterplan seems to ignore the water with little effort to create a public access to the waterfront.

Another case is last year attempt by the city to put forward a rezoning plan for Flushing West that focused on redeveloping the brownfields along Flushing Creek—the creek that flows directly into Flushing Bay—with new residential buildings and a brand new waterfront. But the plan was ultimately ditched in May.

“Nobody wants to deal with such a polluted water” says Cody Ann Herrmann from Friends of Flushing Creek, a community driven organization that advocates for the Creek and Bay environmental restoration.

Across the country, cities have been trying to integrate open water restoration with waterfront accessibility and one successful examples lies just a few hundred miles north of the Big Apple.

Buffalo, an old legacy city whose economy traditionally relied on harbour and manufacturing activities turned to an environmental restoration project to recover from economic depression.

Six miles of the Buffalo River which runs in one of the most depressed, poor and polluted part of the city, have been dredged to remove toxic sediment. It cost \$100 million but is paying off.

“That is truly cleaning the water,” says Jill Jedlicka executive director of Buffalo Niagara Riverkeeper. “Private developers, once they realized the river was going to become an ecological asset, started investing along this river that was a considered a liability for the last 50 years.”

Buffalo’s strategy involved more than mere dredging. It aimed to develop an entire new neighborhood, [Canalside](#), that would reconnect Downtown Buffalo to the Lake Erie waterfront through a network of streets, canals, and public spaces. Amenities are located along the river’s edge and improving pedestrian access to the water was an explicit goal included in the plan.

Buffalo and New York City’s waterways have a lot in common. As in New York, Buffalo once had one of the busiest harbor in the world; its waterfront hosted warehouses, factories and harbor facilities. Just like New York, its waterfront became less and less accessible as the coastal highways from the 60s separated the waterfront from the city. “Entire generations forgot about the water,” says Jedlicka.

Today Buffalo’s Inner Harbor is a [success story](#). The waterfront has become an economic engine that attracts businesses, the people of Buffalo have an accessible public space and can physically access the water--to the point that during summer, the river has to be patrolled to avoid traffic jams.

It took Buffalo almost 10 years, an enlightened mayor and a lot of community activism to get to this point. Despite ongoing combined sewer issues, the city is now moving forward to restore its outer harbour as well.

Buffalo is not alone. [Baltimore](#), and more recently [Detroit](#) are other good examples of surging cities of the water, where environmental restoration has gone along with open waterfronts.

New York is a much more complicated and vast global city, but is also full of resources that few have. “We are totally a city of the water,” says Dixon. “Success here can be huge.” Undeniably, improvements have been made, but the feeling is that the city lacks a vision, and is hostage of too many agencies and bureaucracies.

[Sixty percent](#) of the Big Apple’s waterfronts is still inaccessible according to the New York-New Jersey Harbor & Estuary Program, especially in low-income neighborhoods. While open water pollution levels around the city are at record lows, especially along the main public beaches and in the Hudson River, places such as Flushing Bay and Creek, Harlem Creek, the Bronx River, Westchester and Alley Creek, Newtown Creek, Gowanus Canal, Coney Island Creek and Jamaica Bay still suffer from either access barrier, water pollution or both.

Even today, there’s life in Flushing Bay. A few teams of dragon boats, along with kayakers and sailors make the bay their blue backyard. This stretch of water is particularly calm and suitable for human powered boating. [City Limits](#) in the spring of 2015 joined The Empire Racing team and reported on the water quality in the bay. Eighteen months later, very little has changed.

On a clear November Saturday afternoon the bay looked sparkling blue and beautiful. Along the promenade senior members of DCH Racing were teaching the lion dance to the juniors in preparation of the Chinese new

year celebration. Boats reflected in the mirror-like, flat water but at a closer look, large amounts of trash and oily substances clustered around the piers of the marina. The day before it had heavily rained and CSOs poured in the bay.

Despite the ongoing issues, Flushing Bay really has all it takes to become a thriving waterfront. Its calm waters are the only ones in the city to be appropriate for professional dragon boat racing, the area is accessible by the 7 train and by that same highway that separates it from the rest of Queens. It is close to Citi Field, La Guardia and Corona Meadows Park, all stakeholders that could play a role in a waterfront redevelopment.

Ng hopes that one day the bay will be selected as the training field for Team USA, the olympic dragon boat team and that things will radically change. “It shouldn’t be like this,” he says.

Herrmann is a young resident of Flushing doing community outreach and trying to bring more people to the water, to show them happens when it rains and introduce them to the incredible environment hidden behind the highway.

“When I was younger I always wondered why there were seagulls on the supermarket parking lot, nobody told me about the water,” she says. The most difficult part of her job is to reach people that live further inland don’t know about the water and are not aware that their sewage system drains into the bay. To her, human access and cleaner water go hand in hand, because people produce the water volume that triggers CSOs and the litter than floats through storm drains into the Bay’s waters. “People will stop taking a shower when it rains if they know what happens to the creek and the bay when they do that.”



# Cleaner Creeks and Bays, But How Will New Yorkers Access the Waters They Own?

By **Guglielmo Mattioli** | August 16, 2016

A clean-up on Jamaica Bay in July. The future of the bay depends on sizable numbers of New Yorkers visiting it to become stakeholders in its protection. But larger numbers of visitors will present a new ecological challenge.

After decades of neglecting and polluting its network of waterbodies, New York City is slowly reclaiming its creeks, marshes and shorelines.

“The last 20 years have been about New York rediscovering the water,” says Robert Pirani, director of NY-NJ Harbor & Estuary Program.

Yet ongoing environmental issues and scarce access to the water, which is mostly still treated as something to look at more than experience, is hindering New York from reaching its full potential as a waterfront city.

The NY-NJ Harbor & Estuary Program released in April a detailed report on the level of public access along the region’s waterfronts and some of the findings are striking. Access is not evenly distributed along the city

neighborhoods; often low-income areas are blocked from the water's edge. Overall, more than half a million people live within one half-mile of the water but are in higher need of access.

The city has invested billions of dollars to improve its waterways, increase access points and raise water quality levels but few would think of New York as city where it's easy to swim, kayak, fish and physically experience the water.

“We came a long way but we only started to scratch the surface,” says Roland Lewis, president and CEO of the Metropolitan Waterfront Alliance, a non-profit organization dedicated to make New York and New Jersey harbor cleaner and accessible.

New York's waterfront resurgence is not free from struggles and open questions. Is it really feasible to clean up the water? How will it be used once it is clean? And who will get to use it?

## **Changing tides**

The process of reclaiming New York's waterways started decades ago.

Until the 1950s, the city had a strong maritime identity. Along the East River, ships were being built in the boatyards and immigrants from all over the world were entering the city by boat. The waterfront was a bustling world with busy docks juxtaposed with various types of manufacturing. Slowly the space-hungry harbor work largely moved to Elizabeth, N.J., airplanes replaced ocean liners as a way to access the city and shorelines were deemed the perfect place to build highways, ultimately separating the city from its open waters.

Open, and by that point, *polluted* water: Those waterfront factories had been discarding toxic waste into our creeks and water for decades.

In the 1990s the city, pressured by advocacy groups and federal and state legislation, decided to invest resources to reduce astounding pollution levels in its waterways. Ultimately the city, which by this point had noted the disappearance of most of its harbor activities, identified the abandoned or underused waterfront land as an opportunity for development that could generate revenues and boost the city's image.

The Bloomberg administration in 2005 rezoned miles of once industrial waterfront. The result is a swath of new buildings and parks along the

edge of Brooklyn Heights, Williamsburg, Greenpoint and Long Island City. And that could be just the beginning.

“The demand for certain lifestyle amenities, tourism and unique experiences—it’s just going to grow in the future,” says Pirani.

But Lewis explains that creating access to the water means more than just being able to see it. “We have seen in the last generation a desire for physical access to the water,” he says. Lewis envisions the waterways of New York as a liquid sixth borough, an incredible strategic asset that can host boating and harbor activities together with recreational, environmental and educational usage.

“The great news is that we’ve got tons of waterfront miles—520—and there is plenty of room for lots of different activities,” he says. The bad news is that to transform the open water into a real, usable asset it costs money. Piers and docks easily deteriorate, shoreline restoration projects are costly and more complex pollution reduction interventions are enormously expensive.

Furthermore, the city lacks an integrated vision and proceeds in its reclamation of the water by fragments; efforts to reduce sewer overflows,

for instance, aren't paired with strategies to make the water more accessible.

An integrated vision is not optional, advocates say. Waterfront real-estate development is intertwined with clean-water issues, questions about access and the reality of rising sea levels.

“We are going to get much more familiar with the water weather we like it or not,” says Rob Buchanan, cofounder of New York Water Trail Association, whose mission is to increase the number of boat-launching sites across the five boroughs.

“It's coming and is going to overwhelm us,” he says.

City Limits explored and visually documented how this water renaissance is working out in two waterbodies that represent waterfront New York: Newtown Creek and Jamaica Bay.

The first is one of the most polluted creeks in the nation, flanked by tens of manufacturing industries. It forms the border between Queens and Brooklyn.

Alternatively, Jamaica Bay is a vast natural oasis, just one hour by subway from Manhattan, that despite some ongoing serious issues, has recovered dramatically from high levels of pollution. Millions of people who land every year at JFK Airport—whose runways border bay water—don't realize they are actually landing in an incredible natural ecosystem.

In these communities are people who have invested time and energy to restore the waterways for all of us, and others who—despite their proximity—don't realize how much water is around them.

### **Pollution history was made here**

Newtown Creek is a 3.8-mile-long waterway separating North Brooklyn from Western Queens. A seamless series of factories, production warehouses, waste treatment facilities and energy plants sit along the shoreline, limiting access to the water—making it difficult to even see it, not to mention experience it. The creek suffers from sewer overflows, illegal discharges, stormwater runoffs and litter.

The history of the creek is marked by one of the worst oil spills in U.S. history. For almost a century, oil leaked from the ExxonMobile refinery situated along the creek's shore, devastating the ecosystem and seeping

into 50 acres of land in the Greenpoint neighborhood. The damage caused by the leak remains. There has been no thorough study of the effect of the spill on local residents' health and only a small part of the oil has been recovered. Today up to 20,000 people live within walking distance of the waterfront of Newtown Creek but have little access.

In 2010 the creek was declared by the EPA a Superfund site, which means that the federal agency is going to invest resources to assess the damage, identify the right way to clean it up and pursue past polluters to pay for that work.

Currently, the project is in its Remedial Investigation/Feasibility Study (RI/FS) phase, during which experts assess the nature of pollution, the risk it poses to human health, the environmental damage and the cost of treatment.

The problem is that there is no clear timeline for when the remedial study will be concluded. At a recent meeting of the Newtown Creek Community Advisory Group (CAG), EPA couldn't provide a target end date for that phase.

Timing aside, critics worry that the process will fail to address the massive environmental problems in the creek. "The Superfund will fail to

clean the creek because the legislation allows the polluting industries to select the contractor who is going to do the remedial study,” says Sarah Durand, a biology professor at La Guardia Community College who works closely with the Newtown Creek Alliance, a local community organization dedicated to restoring, revealing and revitalizing the creek.

### **Boats, bathers ... or both?**

The tensions aren't just about the Superfund process: There are also disagreements about what the final goal of the clean-up should be.

The federal Clean Water Act says that every waterbody should be clean enough so as to allow fishing and swimming. If a waterway can't be classified fishable/swimmable it has to be proven why, and actions should be taken in order to improve the quality of the water as much as is possible.

In order to achieve the act's goals, the city is required to prepare a Long Term Control Plan (LTCP) for every polluted waterway under its jurisdiction. The plan has to be submitted to the state, which ultimately

decides if the city proposals are sufficient to achieve the act's fishable and swimmable standard.

The swimmable standard is the hardest to achieve. It means that the water is so clean that people can swim in it without risking infection. But germs aren't the only thing that keep people from diving in to a particular waterway. There could be safety considerations like currents, physical constraints like steep drop-offs or bulkheads between the shore and the surface of the water and, as in the case of an industrial working waterway like Newtown Creek, other uses: namely the barges coming in and out at all times.

The question of whether physical impediments to swimming render the Clean Water Act's "fishable/swimmable" standard moot has been raised elsewhere in the city: At Alley Creek in Queens, where the city and state are locked in a legal battle over a clean-up plan that the state says is insufficiently ambitious but the city argues is suited to what the Creek realistically offers.

In Newtown Creek, advocates generally accept that the waterway will be shared.

Erik Baard, a committed kayaker and the founder of Harbor Lab, an organization based on the Queens side of the creek that promotes environmental education, thinks the future creek will still be a working waterway, perhaps one equipped with better technology like greener barges and sensors constantly monitoring the quality of the water.

“It’s an ecotopia to make it only recreational,” says Baard, who comes from a family of boaters and harbor workers.

Tensions could rise when officials decide whether or not to dredge the creek’s bed in order to remove the toxic sediments there. Dredging is risky because it could cause more pollution— and therefore limit swimming opportunities—but it would facilitate navigation.

### **Nature is not waiting**

Mother Nature, however, doesn’t have time for humans’ endless debates over which is the best of the worlds that are possible. Life in the creek is finding it’s own way back.

“Despite the abuses and readjustments the ecosystem that has been there in the past is still there and is coming back stronger,” says Willis Elkins,

project manager for the Newtown Creek Alliance. The creek is bustling with life, from great egrets to horseshoe crabs and fish jumping out of the water. (See a video of one such fish [here](#).)

Elkins, a Greenpoint resident, goes out on the creek every week on a small boat to do some water sampling. He navigates up and down the basins that branch off the creek, waving to the pilots of the barges he meets along the way and checking the level of fecal bacteria and dissolved oxygen to monitor the quality of the water. The readings usually deteriorate after heavy storms or on steamy summer days when the water temperature can rise to the 70s and 80s.

“Being out on the water seeing the wildlife, fish and birds flying around is cool and it’s incredible how quiet it can be,” Elkins says.

At the end of Manhattan Avenue on the Brooklyn side is one of the rare access points to the creek, offering a few benches to sit and watch the waterway, though the steps that lead to the water are closed off. People working or living close by go there to relax and enjoy the open views.

Carlton Maurice, a resident of Greenpoint, and his friend Alfonso Maldonado visit twice a week. “We don’t have lot of open space in Greenpoint,” says Maurice. He remembers when it used to smell a lot

more and is impressed by the improvements but has never thought he wanted to kayak on let alone swim in it. “But this place takes your mind off of stuff. It’s an oasis,” adds Maldonado.

As crazy as it may seem, people used to swim in Newtown Creek and all over the East River. Raymond Perreira, a long-time Queens resident, used to dive in the murky waters of Newtown Creek when he was a kid.

“It was maybe 20 of us,” he recalls. “We would jump over the creek’s bridges, and over some fences.” It was during the 50s and 60s. At the time the creek was polluted already but he says nobody ever got sick. “I think we had immunity. We just adjusted.”

By swimming in the water Perreira learned the tide cycles. “We knew the tide changes and when the dirty stuff [would] float one way or the other. The tide would basically bring you across the river.” Perreira says the creek was the best way to cool off in the summer and to swim without leaving the neighborhood to take the trolley to the Rockaways. “But the best part of it was the challenge,” he says.

## **The crown jewel**

If Newtown Creek represents the quintessential industrial canal, a survivor of a century of environmental abuses, Jamaica Bay is that wild swath of land that one would think invincible but is actually extremely fragile.

The bay is a 39-square-mile natural area resembling a huge seashell in its shape located on the southern shore of Long Island. Both Brooklyn and Queens are on its northern side and the Rockaway Peninsula, also part of Queens, forms its southern end. The Bay is separated from the ocean by the Rockaway Inlet. It comprises wetlands, marshes and a national wildlife refuge and is bordered on its northeast side by one of the busiest airports in the world, JFK.

The bay is considered the crown jewel of the city's green spaces, home to hundreds of species of birds, fishes and marine life. It's a ecosystem unique within the entire Northeast coast just a hour subway ride from downtown Manhattan. The proximity to the city makes Jamaica Bay a unique wild environment in urban setting but is also its major threat.

For years the city's sewage treatment plants located around the bay discharged wastewater with high levels of nitrogen into the bay. The

40,000 pounds of nitrogen released every day for years almost killed the bay's vast but fragile ecosystem.

High levels of nitrogen spur algae blooms that make life in the water impossible. Excessive amounts of algae reduce the levels of dissolved oxygen, on which aquatic life depends. Like a domino effect, the more toxic the water, the lower the numbers of fishes, mussels, clams and other form of marine life on which birds rely for food.

High levels of nitrogen are also partially responsible for marshland erosion. The lower the quality of the water, the lower the strength of marshes' roots.

But 2011 marked a milestone in the bay's battle against nitrogen. Natural Resources Defense Council together with three local environmental groups—Jamaica Bay Eco Watchers, American Littoral Society and NY/NJ Baykeeper—managed to force the city and the state of New York to sign an agreement among all parties to reduce by half the nitrogen levels in the bay by 2020 and invest in restoring marshes.

In January of this year NRDC announced that nitrogen levels had already fallen by a quarter.

Dan Mundy Jr. is a member of Jamaica Bay Eco Watchers and a life-long resident of Broad Channel—the only residential neighborhood in the middle of the bay—as well as an active diver, boater and deep knower of the bay.

“I am very encouraged with the nitrogen reduction. We used to have brown, rust-colored water,” he says. “It ain’t the Caribbean now, but the progress is phenomenal.”

### **A comeback, in progress**

However, the bay still faces some big challenges.

“Pollution on the shoreline is still a big issue,” says Mundy. The beaches of some of the bay’s islands are covered with plastic bags, tires, bottles and all sorts of debris. The situation got worse after superstorm Sandy..

Meanwhile, marshes keep on disappearing, in part because of still-high nitrogen levels but also because of climate change. Increasing sea levels,

higher water temperature and violent atmospheric phenomena all contribute to erosion.

“Healthy marshes act like a giant sponge,” says Don Riepe, a member of the American Littoral Society and head of the Jamaica Bay Guardian, while observing from his boat Joco marsh, one of the most spectacular salt marshes in the bay.

Riepe explains the importance of the marshes not only as home for wildlife but also as natural barrier against flooding caused by hurricanes. Marshes mitigate storms’ power and absorb excessive water. The bay is losing to erosion 40 acres of salt marshes every year.

Riepe and his organization oversee several projects to clean up the bay from debris and to plant new marshes, efforts in which young people from nearby neighborhoods are key participants. He expects that in the future, conditions in the bay will keep improving.

“I see the bay becoming slowly cleaner, the marshes being stabilized and hopefully people we’ll recognize the value of having such a natural area in an urban environment,” he says.

## **Issues of access**

The neighborhoods surrounding the bay have difficulty accessing it. The airport walls off an entire sector and is also a source of pollution due to water runoffs and deicing chemicals ending up in the water.

Because of its fragility, access to the bay has to come with environmental education.

“People can go out in the bay, but first and foremost this is a wildlife refuge,” says Riepe, “If we are going to have increase kayaking, it has to be managed.”

The challenge is to promote science and recreational uses together; 13,000 acres of water and wetlands are not easy to patrol and poaching and illegal fishing still happen in the bay. Yet facilitating access is key to increasing people’s awareness of the bay and their involvement in the work of restoring and protecting it.

“The more people understand that this is like Yellowstone and the more they will turn around and say ‘don’t you dare doing something to Jamaica Bay,’” says Mundy.

Newtown Creek and Jamaica Bay are representative of the challenges that many other New York’s waterways—from the Bronx River to the Gowanus Canal, from Flushing Creek to the harbor itself—face. All of these instances require integrated planning and a coordinated vision that keeps in mind the reality of climate change and sea-level rise.

The city’s water has not been this clean in a long time and there have never been so many promenades, river parks, water alliances, kayakers groups and other ways to experience it. Still, New Yorkers tend to forget how much water there is around them, how deeply the city is connected to it for its own survival.

As Baard says about the Newtown Creek, but could be said about all the waterways of New York, “People turn their back from the creek because they think is a lost cause. But we have a natural desire to be with nature, to be connected with nature and by getting people on the water, showing them the signs of life, they feel less futile.”