A MAJOR PARK PROJECT ON THE BANKS OF THE OHIO RIVER WILL EMBRACE HIGH WATERS.

BY TIMOTHY A. SCHULER

It was late February 2018 when the Ohio River began to ooze past its banks and into parking lots of businesses in Louisville, Kentucky. For more than a week, the region had been inundated by up to four times the amount of rainfall it typically receives that time of year, and it wouldn’t be long before February’s flood would be classified as the worst in Louisville since 1997.

While other residents took precautions, Scott Martin, the executive director of the River Heritage Conservancy, a nonprofit working to build a 400-acre park on the Indiana side of the Ohio River, tried to get as close to the water as he could. He drove to a low-lying industrial area at the southern end of Clarksville, Indiana, just across the river from Louisville and part of the future park property. The river’s edge had completely dissolved. The woodlands were half submerged, as were the former quarries, gravel pits, and various scrapyards. Gone, too, was a section of the Ohio River Greenway, a 7.5-mile trail that follows the river’s north bank, much of it atop levees that were built following the Great Flood of 1937, an event against which all other floods in the Midwest tend to be measured.

At the high-water mark, nearly 70 percent of the conservancy’s project site was underwater. But Martin looked at the water-logged landscape the way an entomologist looks at a rare butterfly. “It was a great flood,” Martin says emphatically. “It was a chance to get on the ground and say, what does it mean if this flood suddenly isn’t a once-in-a-20-year event? What if this becomes a once-every-10-year event, or a once-every-five-year event? It got our brains turning.”
If you can picture the crocodile snout that forms the western tip of Kentucky, you can trace the approximate route of the Ohio River, which forms the ragged border between Kentucky and Indiana. Where the croc’s eye would be, that’s Louisville. In 2017, several southern Indiana businessmen (yes, all men) and parks advocates established the River Heritage Conservancy to create a world-class park on the Indiana side of the river that would adjoin the Ohio River Greenway, the last leg of which, after more than 25 years of coordination by state and municipal agencies, was completed in 2018.

Following the lead of other American cities, the goal is to reorient the communities of Clarksville, Jeffersonville, and New Albany toward the river and restore a long-polluted portion of the riverfront to the public trust—to take, in Martin’s words, the “backbone” of the greenway and “wrap that with a landscape that makes it even more desirable to visit.”

Martin would seem to be the person for the job. He spent seven and a half years as the director of the Parklands of Floyds Fork, a sprawling 4,000-acre interconnected park system on the outskirts of Louisville, which won an ASLA Professional Honor Award in 2009 and now sees nearly three million visitors each year. The Parklands represented a major effort to preserve open space in and around Louisville, whose already-renowned park system was initially laid out by Frederick Law Olmsted and further developed by his sons. Today, the Parklands constitutes the largest contiguous open space in the metro area, further bolstering Louisville’s reputation as a city that punches above its weight when it comes to the quality of its green spaces. Martin sees the park across the river as a part of and complement to that system, linked to the city by the greenway and the Big Four Bridge, a railroad bridge converted into a pedestrian crossing.

At the moment, the site is a tangle of roads, woods, wetlands, and junk.
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Roughly 150 acres of the 400-acre property are owned by the River Heritage Conservancy, with another 200 acres owned by public agencies, and more acquisitions are in the works. Notably, the park site is unprotected by levees, creating a horseshoe that is highly susceptible to future flooding. Already, two tributaries—Silver Creek and Mill Creek—back up onto the site when the level of the Ohio River rises, creating emergent wetlands. Any design, by necessity, will have to embrace the dynamism of the river, and to that end, the flood in February 2018 was a useful simulation, Martin says, a chance to fast-forward in real time. Watching the river swell, as if a wild creature raising itself to full height, was far more tangible than any computer model. “Rather than shaping the design in a vacuum, this past year gave us pretty good insight on what the future could bring,” Martin says.

In late 2018, OLIN was hired as the lead designer for the riverfront park. The conservancy asked for no proposals or ideas. Instead, conservancy leadership and an invited jury interviewed a handful of landscape architecture firms that had been invited to apply. “Every design firm will tell you they have river experience, and then when you show them the Ohio River, [most] will say, ‘Oh, you mean a river.”’ To Martin, the project required not only design chops but a certain amount of maturity as a firm. “OLIN checked that box solidly,” he says.

By the end of the year, 2018 had become the wettest on record in Louisville, and the OLIN team had been on site during at least one minor flood event, getting a less dramatic version of what Martin experienced six months earlier. The whole team “found it really instructive,” Martin recalls. “You’re not just looking at a map. You’re walking the site and seeing where water is.”

Conceptually, it’s easy to file the conservancy’s plans alongside so many other riverfront revitalization schemes. But this project, more than others, has the potential to set the bar for a region—and a river—that is hugely consequential to the economic vitality of the nation and that also promises to become far less predictable in future decades.

The Ohio is America’s third-largest river in volume. It is 1,310 miles long and, where it meets the Mississippi in Cairo, Illinois, flows at roughly 281,000 cubic feet per second. The size of the Ohio River watershed, which encompasses parts or all of 14 states, from New York to Alabama, is even more astonishing: More than 204,000 square miles of the eastern United States drain into this river, an area populated by 27 million people, more than five million of whom rely on the Ohio for their drinking water. Besides that, the river is an economic engine, a commercial corridor responsible for the movement of $41 billion worth of goods each year.

The sheer size and importance of the Ohio River made the report released by the U.S. Army Corps of Engineers Institute for Water Resources in May 2017 all the more troubling for regional authorities.
The report detailed the multiple threats that climate change poses to the Ohio River Valley and concluded that the impacts to infrastructure, energy production, and ecosystems would be "potentially devastating." Specifically, the corps predicted that a continued increase in global temperature would likely result in a 5 to 15 percent increase in mean annual streamflow along the Kentucky/Indiana portion of the Ohio River over the next 20 years. By 2099, mean annual streamflow could increase by as much as 25 percent. A river one-fourth again the size of the Ohio could easily overtop levees and gobble up adjacent houses and businesses. Scientists are equally worried about severe water shortages, particularly in the fall, when streamflow could be as little two-thirds of its current flow, which could cause problems for those industries and individuals whose lives and livelihoods rely on the river.

Inundated as we are with news of rising seas and a rapidly evaporating Colorado River, it is tempting to think of the Midwest as somehow insulated from climate change. Some mayors have even begun promoting their cities as such. But the reality is that the region is as vulnerable to global warming as any other part of the United States. "A lot of people don’t think about the Midwest confronting climate change in the same ways that the coasts do, but we do," Martin says. "Every projection we’ve seen is that, if you’re designing a park on the Ohio River today, understand that that river is going to be under different stresses and have a different flow regimen in 50, 60, 70 years. So how can we plan for that?"

"It’s not a matter of restoration at all," Sanders says. "It’s so highly manipulated." How do you take such a hardscrabble ecosystem, at the edge of one of North America’s strongest rivers, wrapped and bound by multiple regulatory
ABOVE
Featuring the largest exposed Devonian fossil bed in the world, this section of the Ohio River is designated as a National Wildlife Conservation Area.

BELOW
The Ohio River Greenway runs parallel to, but is largely disconnected from the river.

The instinct derives from observed behavior. In 2018, as the river rose, spectators flooded through the gates of the Falls of the Ohio State Park, east of the park site along the greenway. “It was an eye-opening moment for us,” Martin says. “One of the design cues we want to pick up is: We want to be the place people come when it floods. We think that’s going to be one of the attractions. How do you design a park that wants people in it when it is at flood stage? How do we make it safe, clean, fun, and beautiful within that construct?”

For Sanders, the strategy is nothing short of a paradigm shift. That a park might be intentionally designed to flood isn’t new. “The difference here is how to integrate that experience,” she says. “How does the design explain what’s going on? That is a different mindset than what we’ve done before.” She points to Hargreaves Associates’ Louisville Waterfront Park across the river. It can flood. It flooded in February 2018. It was designed to withstand such events. But it is not, she says, creating a “relationship to that phenomenon of being submerged and revealed and submerged and revealed.”

Multiplied up and down the Ohio River Valley, such thinking could have a measurable impact on vulnerable communities. To achieve it, however, the River Heritage Conservancy will need to challenge some of the assumptions that have informed other open-space projects along the river, including the Ohio River Greenway, which, despite being an indispensable transportation and recreation corridor, “didn’t address the fundamental question of what happens on the other side of the levee,” Staurinos says. “You’re still forgetting what the river is. You’re still pushing the river into the background.”

Staurinos sums up the crux of the problem: “Throughout the entirety of the Ohio River Valley, the river is looked at as this commercial and industrial corridor, when really it’s a wild, young river that needs someone to begin to address it in that regard.”

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