Finding Sustainability: Cleveland—from a Forest to a Fire to a Flight
By Richey Piiparinen

"The fire is being fought, but the flames do not seem to diminish, and the clouds of smoke get thicker, and the ashy black flakes keep falling. Heat presses down on their bodies worse than if they were standing next to a bonfire. They do not stop holding hands. The tears in their eyes could certainly be blamed on smoke. Time stops, and they watch the river burn."
--Mark Winegardner, Crooked River Burning (2001)


Courtesy of Cleveland Press Collection

Achieving the lowly designation of getting water to catch fire—it happened dozens of times in Cleveland, with the Cuyahoga River eventually becoming synonymous with doing the unthinkable, the unnatural: *water on fire*. And while the last of these fires in 1969 was mild in comparison to the five-alarm spark that rampaged sections of the Flats in 1952, it was nonetheless memorialized in the nation's mind's eye through a Time article dated August 1, 1969, which states: "Anyone who falls into the Cuyahoga does not drown, Cleveland's citizens joke grimly. He decays..."

Given that history is bound to become repeatable for those who don't study it, the question becomes, then: what were the societal forces that enabled such environmental degradation? Conversely, what were (and are) some of the forces that enabled the health of the city's air, land, and water to return in the four decades hence?

What follows is a narrative retell of the historical relationship between Clevelanders and the land they inhabited. Within it, the evolution of Cleveland as a land form will be discussed, as will the social and public policy context that enabled the transformation of the area's natural resources into its unnatural liabilities.

Before Moses: the glaciers, and then came the lakes

Before Cleveland, there was wilderness, and then came the settlers to begin the layering of a city on top of the wild. When Moses Cleaveland reached the mouth of the Cuyahoga River in 1796 he believed he found the perfect spot to do this. Known then as the Western Reserve—a swath of land stretching 120 miles west from the Pennsylvania border and 80 miles south from Lake Erie—the chosen epicenter where the river met the lake had several advantages. In particular, Cleaveland admired the access to and from the area, stating the site "must command the greatest communication either by land or water of any River on the purchase..."

As it were, the advantage of the area's natural resource wealth was already being capitalized upon. And while these resources no doubt allowed the settlement called Cleveland to arise like concrete and steel mountain atop the land beneath it, it remains important to step back for a moment to the years prior to 1796 in that any understanding of a city and its nature calls for an understanding as to how that nature arrived in the first place.

To many, glaciers are of the purview of the North and South Poles. During the most recent glacial age, however, glaciers extended over much of Ohio, leading a southward path like a large ice tool that carved the earth's surface into bluffs, valleys, and mounds to form today's landscape. Eventually, as the earth warmed the glaciers receded, leaving glacial meltwaters to fill in the shapes its

previous path had produced. In fact, this is how Lake Erie was created, with its waters being trapped in a kind natural bathtub whose walls were made of rock debris and elevations.

Too, the Cuyahoga River was only made possible by the glacial arrival and retreat in that its drainage pattern was determined by the path of least resistance to the lake. Feeding the Cuyahoga, other grooved catch basins such as creeks and streams were formed to make up the last piece of what is the region's watershed. Put simply, a watershed dictates the drainage pattern for much of the storm and groundwater in Northeast Ohio, regardless if the water arrived from a rain burst or a garden hose. Perhaps the key watershed in Greater Cleveland is the Cuyahoga River Watershed as it drains 813 sq. miles into the larger Lake Erie Watershed, which in turn flows into the Great Lakes Basin.

In all: the landscape of the region is not unlike the circulatory system of a body, in which webs of creeks, rivers, and lakes enable a circulating flow of what is argued as the lifeblood of the region: our supply of fresh water. In fact, it is this fresh water that has enabled the presence of soils, plants, and animals, or in a few words: the rich biodiversity that is Northeastern Ohio life. Still, just as a bodily system can be affected with the block of one artery, so too can the balances of a locale's ecology become affected by a break in one of its ecosystem's parts. And this breakage has historically occurred when humans erected their cities as separate from nature as opposed to in accordance with those guiding principles of life.

From utilizing nature to the stripping of its worth

In the early 1800's water was the superhighway of today, with the ability to transport people and goods from place to place. Cleveland was well situated in these respects, and so by the 1820's the city's reputation as a port and mercantile town took off. In a letter back home to Vermont, settler Jessie Harris described Cleveland in 1824 as “a thriving town” with nine stores and three taverns, and with a lake where six vessels were owned and all forms of merchandise could be bought. The takeaway here, though, is that water was not being stripped of its worth for economic gain as much as it was being utilized through its ability to flow.

Emphasizing the sense that Cleveland was still evolving with its natural resources intact, the editor of the *Cincinnati Gazette* wrote of a visit to the city, stating: “the town is clean, tasteful, elegant and healthful; for vegetables, fruit and flowers it is preeminent—for groves, parks, ornamental trees and shrubs, it is hardly surpassed...”

But things changed quickly. Particularly, with the revving of the Industrial Age the city's industry changed from shipping into the refinement of resources like iron and coal into—among other things—oil and steel. In fact, by the 1860's the city had 30 oil refineries and 50 iron ore plants, with an outgrowth of secondary manufacturing plants being spun from these driving industries. By 1884 Cleveland was the oil capital of the world with 86 refineries located within city limits. And where were the refineries, factories, and mills being placed? You guessed it. All along the lake's shore and the river's banks.

Of course the problem here is that in the case of refinement, byproduct was necessary—and this byproduct often went into the Cuyahoga before entering Lake Erie. In fact as early as 1881 the Mayor of Cleveland referred to the river as an “open sewer through the center of the city”. Obviously, this affected the passenger boats still running on the river, with the greened banks and blue flow soon replaced by visions of a river that was “iron red with an iridescent scum of oil-bow colors…”

But in what would become a budding belief that nature's value equated mostly with how it served man's economic pursuits, many saw it simply as the cost of progress. Writes W. D. Ellis, author of *The Cuyahoga:* “There were some in carriages going over the bridge who looked down at the red and said it was a shame to dirty the river that way. But those who were right down in the waters in boats and barges and scows thought the red and the rainbow were the sweetest colors a river ever had.”

Again, the cost of progress, and so the pollution continued for decades until the “rainbow” turned to the colors of fire. But not before there were the colors of smoke.

And smoke there was, with the burning of coal and oil enabling a grime and soot to cover the city like a black snow. Imagine, then, leaving the house for school or work in a white shirt, and then needing to replace it by the afternoon. This was a reality in the city in the late 1800's, and the smog became so persistent and choking that Cleveland's political leaders were getting pressured from their constituents to begin regulating just how much exhaust could be pumped out. But in what would be a recurring theme in the city's—if not the country's—industrial infancy, there was too much money to be had to begin the regulation of industry to any significant extent.

All a commodity: from laptops to shoes to water and trees

Have you ever gone into your backyard, laid down, and just stared at the clouds? The stars? Have you ever gone fishing with your family? Went hiking with friends? Or even simply played with grass as the sun shone overhead, warming your skin? Well, if you had then you can understand the almost indefinable satisfaction that can arise when people are experiencing the natural world around them. And it is an experience that you cannot put a price on as the natural world operates outside the bounds of economic systems. After all, the earth existed before man, and so it doesn't bend to the wants inscribed in man's rules.

In 1957 the economist Karl Polanyi came up with the term “noncommodifiability”, which states that nature is resistant to commodification—or to being sectioned, possessed, sold, and consumed. Said Polanyi: “What we call land is an element of nature…To isolate it and form a market out of it was perhaps the weirdest of all undertakings by our ancestors”. In other words, air, water, soil, and wildlife cannot be bought and used like laptops or shoes, as natural entities are integral to our existence. Besides, what good is a laptop or slick pair of kicks if there is no water to drink or air to breathe, or for that matter: life to be lived?

Courtesy of Cleveland Memory Project

Still, as evidenced by Cleveland's industrial arising, America had been putting a price on the environment for generations, using rivers as a dumping pot to make goods to sell, and turning air into a catchment for factory smoke. In fact, there is a long history in this country of reducing natural resources into commodities, and it has taken a toll on the quality of our experiences, to say nothing of our health.

Looking back, there have been many examples of citizenry dissatisfaction with the environmental degradation around the turn of the 20th century. In each case, the public complaints didn't affect the arc of a public policy equating the man-made with the future, and the natural with the past. To illustrate this, below lists a few of the early local and national attempts aimed at industrial regulation. In all, these attempts were piecemeal—without teeth—and thus stood no chance against the ethos in a modernizing America that isolated cities away from a natural environment that was increasingly being perceived as getting in the way of city-building.

- Facing complaints from residents about air quality, Cleveland received legislative power to “regulate and compel the consumption of smoke emitted by the burning of coal”. The inspector's first attempt at clean-up was in 1883 with an order to 140 furnaces to limit their exhaust. The air for decades would only get blacker, however.

- Emphasizing the extent that waters were seen simply as an economic tool, one of the first regulatory measures—the 1899 Rivers and Harbors Act—disallowed the disposal of wastes into navigable waters. Fairly progressive environmental safeguard for the time, right? Well, not so much, as the Act did not forbid the dumping of liquid wastes but only those things that could make the rivers impassable, thus hampering economic functioning. Of course the problem here is that liquid wastes made up a lion's share of the pollution into the Cuyahoga and Lake Erie.
- By 1912 the Cuyahoga became so polluted with oil byproduct that the river would regularly erupt in flames if steamboat captains shoveled glowing coals overboard. Obviously, a bit unnatural, and so the city again attempted to legislate pollution with an ordinance disallowing refineries to dump oil. But again, the ordinance was rarely enforced, and the punishment (a $10 fine) had little prohibitive effect.

Now, it becomes important to understand the context at the time which disallowed any real stop to the pollution that was allowed to become rampant. And once more, it deals with the broad beliefs of a time equating progress as a matter of industrial output, regardless of the costs. This belief not only pervaded the business culture, but the culture at-large, particularly within the media and the policies of the federal government.

For example, the *Cleveland Press* weighed in on the increasing fire hazard that had become the river in a 1936 report entitled: *City's Lake and River Fronts in Constant Peril of Conflagration Without the Protection of Fire Tugs*. The message here, however, was not one of addressing why the river was made of oil in the first place, but rather the inability of the fire department to stop the burn. As for governmental policy, a 1957 Army Corp of Engineer report concluded the Cuyahoga River was in "exceptionally good" shape simply because all docks were open for the upcoming shipping season. There was no mention, however, that aquatic life ceased to exist in the river. How our priorities become us.

Stinchcomb, and the signs of true progress

Though little movement was being made on the pollution front at the turn of the century, this wasn't the case as far as the conservation of land—and Northeast Ohio retains physical proof of this in the form of the Cleveland Metroparks. Also called "The Emerald Necklace", this stretch of interlinked greenspace and habitats was the vision of Bill Stinchcomb: a man ahead of his times in his ability to see a future in which cities are less cut off from their nature than they are hemmed to their beauty.

In its simplest sense, conservation entails preserving an area's natural resource wealth, while at the same time allowing opportunities for people to experience its value. As it were, it is perhaps the antithesis to the commodification of our environment in that the worth of conserved land exists in the presence of its preservation.

Nationally, the conservation movement was led by Theodore Roosevelt. And not only did Roosevelt spearhead what is today one of the country's great collective gems in its national parks, but he also sparked a vision in the minds of those like Stinchcomb who knew back then what we experience today: that the earth has limited resources. Speaking to Congress in 1907, Roosevelt forewarned that: "Optimism is a good characteristic, but if carried to an excess, it becomes foolishness. We are prone to speak of the resources of this country as inexhaustible; this is not so." Thankfully for Clevelanders, Stinchcomb listened, as the city is one of the few areas in the nation that conserved

Courtesy of Cleveland Memory Project

a contiguous stretch of its inner-ring land as a means to tie the metro to its nature, hence: the Metroparks.

Stinchcomb, a former engineer for the city's parks, first proposed the idea of a series of parks and habitats to City Council in 1905. In effect, he saw the land as providing a buffer of nature in a city that was expanding rapidly, with this buffer not only preserving a swath of the city's biodiversity, but also allowing city residents the pleasantries of recreation. Said Stinchcomb: "Man is an outdoor animal. We must have these great outdoor rest places close to a great industrial city…and as working days grow shorter we must find healthful ways of filling leisure time."

After much legislative haggling and intense lobbying efforts by Stinchcomb himself, the Cleveland Metropolitan Park District was established in 1917, with Stinchcomb eventually becoming its director in 1921. Before retiring in 1957, Stinchcomb oversaw much of the parks 18,500 acres of land acquisition, no doubt making him the lead artisan in the crafting of the Emerald Necklace we wear today.

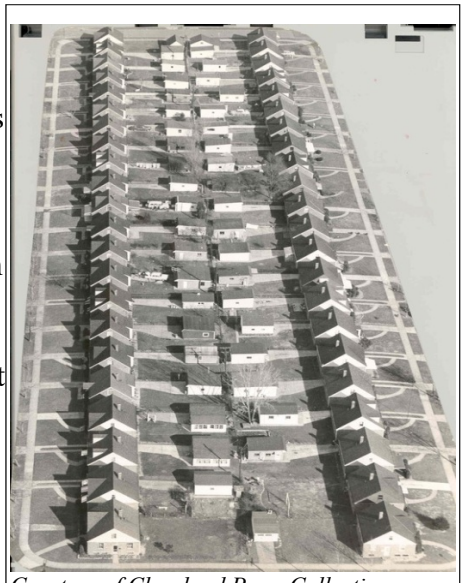
Where there's smoke, there's ~~fire~~ people leaving

It didn't take long in Cleveland's development for people to begin leaving the city limits for the ever increasing outreaches of the suburbs. In fact, as the city's industrialized core kept taking on the flavor of a factory—both in the taste of the water and in the smell of the air—there began the out-migration to such inner-ring suburbs as Parma, Cleveland Hts., and Lakewood by the 1910's. The pitch—as far as marketing by the various developers—was simple: to have everything you couldn't in a cramped, dirty industrialized city. Reads one advertisement: "What—Happiness and Independence TO *own your own home* TO *have your own garden* TO *raise your own fruit and chickens* TO *live where the air is clean and your children have every chance to be strong and healthy*". No doubt an attractive thought when walking your children to school through the haze and hum of a nearby mill.

Still, the option of moving away from the urban core was only an option in so far as one can travel efficiently to and from work. But by the 1880's the streetcar system began expanding these options, with the 15mph travel speed allowing for development up to 10 miles from the city center. These streetcar suburbs grew rapidly between 1910 and 1920's, as the attractiveness of the city was being replaced proportionally by a charm in the outlying communities.

By the 1940's the availability of the automobile expanded even further those chances at suburban life, with marketable land now being developed up to a half-hour's drive to the city center. As well, the use of the car as the preferred choice of transportation (64% of families owned cars in Cuyahoga County in 1940) tilted infrastructure spending towards more roads and less rail, with a multi-million dollar integrated freeway system completed as part of the 1956 Federal Highway Act. And where there were more freeway entries and exits there was more demand to erect suburbs, with only one house being built in the city for every four suburban lots developed by the 1950's.

After long, this interplay between car demand and road supply began dictating the way Cleveland proper was growing, with such automobile suburbs as Fairview Park and Mayfield Hts. being built much less dense than their streetcar suburban counterparts. Density, here, means what is close to you as you walk out your front door, and if there is not much to walk to then there exists little investment in the city layout for the pedestrian, thus making a car trip a necessity for even a glass of milk, a pop. As we know today: sustainability this is not.



Courtesy of Cleveland Press Collection

Perhaps that is one of the greatest ironies of the mass suburbanization of not only Cleveland, but the country, as one of the initial factors of out-migration was the desire for a cleaner environment. Yet what was perhaps a good intent turned into an equally harmful consequence, not only related to the poor air quality due to all the tailpipes coughing, but in what the disinvestment did to Cleveland. And the city still hasn't recovered, nor has the belief yet resonated that if you don't have a healthy city core than you are a suburb of what exactly? Talk about a road to nowhere.

The upside to abandonment

Courtesy of Cleveland Plain Dealer

Environmentally speaking, there was perhaps a silver lining to the disinvestment, at least related to pollution control. Specifically, once the roads were built that headed out, and the people left, so too followed the retail with malls like Eastgate (1954) and Parmatown (1956) creating blocks of paved parking lots and shops which only further served to keep folks out of the city. Too, by the 1960's even the mills and factories began their own exodus, setting up in greenbelt areas located along highway interchanges and access ramps.

In sum: much of the pressures that enabled the inhibition of pollution control were lessening—as the money was leaving to the suburbs. And so many of those that were emboldened to shout "progress" were made to acknowledge just what had been made of the natural life around them. In fact, acknowledgment was perhaps easier to come by in the 60's when you'd wake up, read the paper and see a headline like this in the Cleveland Plain Dealer: *Cuyahoga River Put Among the Most Rank*.

Acknowledgment that as a community we had screwed up—there were many signs of this in the 1960's, even before the infamous fire. The efforts were many, putting Cleveland and its local environmental policies well ahead of the national curve, if not providing the mold for that curve to follow. Below lists a few of these endeavors.

- In 1963 a group of local industry and municipal leaders established the Cuyahoga River Basin Water Quality Committee. The committee began conducting water quality surveillance, with the effort evolving into the hiring of a private scavenger vessel to clean up debris that kept bumping and blocking the ships. Eventually, skimmers were hired in an effort to hose up oil spots.
- Driven by "a strong sense of place", local car dealer David Blaushild took out full page ads and advocated at his dealership to collect over 200,000 letters and signatures in an attempt to force adherence to existing clean water laws. In 1965, Blaushild delivered this equivalent of a large public voice to a federally-hosted conference on Lake Erie pollution.
- Fearing the city's continued decline, business and municipal leaders attempted to invest back into Cleveland's natural resources with the passage of a $100 million dollar bond to finance river cleanup and protection. Passed in 1968 by a 2 to 1 margin, the dollar figure was an impressive commitment at the time considering the federal government spent only $160 million for water clean-ups *nationwide*.
- In 1969 Cleveland enacted "one of the strongest municipal air pollution codes in the country" under Mayor Carl Stokes. No doubt a sign the code was long overdue (and that its effect would

take time), Cleveland was still rated as the fifth most air polluted city in the country in the 1970's.

Progress, no doubt. But it still wasn't enough. Because while the problem of environmental pollution had captured the attention of Clevelanders and its politicians—namely, Mayor Stokes—the effort by the federal government was still lacking. In short, feds in D.C. didn't enforce, they didn't fund, and sometimes they were even directly part of the problem. For instance, the Army Corps of Engineers deposited contaminated dredge from the bottom of the Cuyahoga into Lake Erie on a regular basis. And while the 1965 Federal Water Pollution Control Act aimed to force the Corps to clean up its act, they didn't, instead defending their pollution as "justified".

Courtesy of Cleveland Press Collection

Then, June 22, 1969 happened. It was an oil slick and debris that caught fire, and it was put out quick. Not even one of the worst fires in the list of past Cuyahoga burnings. But the story got picked up by *Time* and the *National Geographic*. And then it went viral in the image of the public mind—*water on fire*. Said Environmental Protection Agency (EPA) Administrator Carol Browner: "I will never forget a photograph of flames, fire, shooting right out of the water in downtown Cleveland. It was the summer of 1969 and the Cuyahoga River was burning."

And thus finally, with the image of our river capturing the American imagination so beget an environmental consciousness, and the federal government finally began to get serious. Remember that Rivers and Harbors Act of 1899, the one not used, rarely invoked—toothless? Well, between October 1, 1969 and April 15, 1970, the U.S. Department of Justice made sixty-six prosecutions under the Act, with the prosecutions including a few steel mills along the Cuyahoga. Businesses complained because the law was outdated. Two years later the Clean Water Act was passed. Emboldened, environmentalists pushed for a Clean Air Act not long after. Both Acts made substantial progress in eliminating pollution.

As for Cleveland, while the fire no doubt initiated the seed of what would become the unending Cleveland joke—that is, the "Mistake on the Lake"—the truth of the matter is more complex. Because it was not so much the river catching on fire that ignited the nation's environmental consciousness, it was rather the fact that parts of the country like Cleveland had already been developing an environmental awareness, and—like a fire—this awareness had finally spread to the rest of us.

Developing (literally) the next generation of concerns

Between 1950 to 1990 Cleveland's population declined from 915,000 to 505,000. Conversely, the suburban population ballooned during this time period from 618,000 inhabitants to 1,326,000. And as touched on previously, the outreaches of the suburban migration kept growing from 10 miles to 20 miles of the city center. With the eventual migration of jobs to the suburbs so came the evolution of office parks in the likes of North Olmsted, Beachwood, and Independence. Given that a chief predictor of home location is the distance to and from work guess what happened next? Well, people moved up to a half hour's drive away from these suburban employment centers, creating for what we know today as sprawl.

The effects of sprawl make up the next generation of pollutants. First—and as was previously touched upon—sprawl is a city form tied to the car, or more exactly: the need of a car to go about one's daily business. The problem here is that the average driver emits 5.5 metric tons of carbon dioxide

according to the EPA, with the gaseous exhaust having been linked to global warming. Also, driving requires oil, and oil availability—naturally—has its limits. Says L.B. Magoon, a petroleum expert: " In the last five years, we consumed 27 billion barrels of oil a year, but the oil industry discovered only three billion barrels a year. So only one barrel was replaced for every nine we used."

Second, sprawl also has a significant effect on the area's watershed. Specifically, when a new development is put up in Avon or Medina there arrives significant adaptations to the natural landscape. Most importantly, grass and/or farmland is paved over for streets and house foundations, and for the eventual big box stores that are erected to serve the population. Also, creeks and other natural drainage patterns are often removed or buried to allow the construction of buildings on the most ideal lots. Together, a problem is created in the circulation of our area's water as it attempts to finds its way back to Lake Erie.


Courtesy of Cleveland Plain Dealer

More exactly, pavement is impervious, meaning that when rain falls it can't be soaked back into the ground and then into watershed naturally, but instead "runs off" to the nearest storm drain. For some suburbs the rain that enters a storm drain enters into the Cleveland sewage system. Cleveland's system—being developed years back—combines sewage from bathrooms and rain from drains into one pipe. Thus, when it rains really hard the system can't take it, and so the mix of rain and human waste is discharged through a number of Combined Sewage Overflows (CSO) into the Cuyahoga or Lake Erie. Gross, eh? Well, if you ever go to the beach after a hard rain and no one is around and the sign says "closed", now you know the reason for the stillness, to say nothing of the smell.

Another problems relates to the health of the area's streams and creeks. In particular, many of the newer suburbs and exurbs have separate drainage systems: one for stormwater and one for waste. These stormwater drains are often diverted into a nearby body of water, and given the amount of increased run-off due to all the impervious pavement—combined with the fact that many streams and creeks have been buried underground—what often occurs is an overload of sorts, with floods, erosion, and the disabling of aquatic habitats common.

Returning, then, to the analogy of Northeast Ohio's watershed as being equivalent to a body's circulatory system—what is happening here exactly? Well, some veins are being removed, others overloaded and blocked, and thus what is occurs is an eventual hemorrhaging of sorts that will affect the health of the body that is the land and water we live in, on, and are comprised of.

Going forward often means coming back

The current face of sustainability in the Cleveland metro is an accumulation of past struggles and successes combined with the potential of tomorrow's solutions. And yes: the river burned, but as was discussed the burning was less a black-eye on our city than it was a turning point in which our quiet battles for environmental justice helped create an open shout for what is today a growing environmental consciousness.

Still, with every victory begets another fight, and issues such as car-oriented development will be a challenge for a long-time coming. In this struggle we must remember that a return to the core of a metro region is required for that region's economic, social, and environmental well-being. And just what will this "return" look like? It remains to be seen. But what cannot denied is the fact that the epicenter was chosen hundreds of years ago where the river met the lake, and so any solution to the

health of us as a regional body must eventually come through where we arose as a city out of the forest. Because no body can survive without its heart. Just like no body can survive without the land it lives from.

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