Signs of Change: Waste and Environmental Justice in Joliet, Illinois

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Introduction

Since its incorporation as a city in the mid-1800s, Joliet has been solidly rooted in industry. It’s maintained the nickname of “Stone City”, and the high school mascot is a hulk-like “Steelman”. Before industrialization ever took place, the land on which Joliet was founded is eloquently described by the city’s website as “marked by bluffs to the west of the Des Plaines River Valley, at the time well-timbered, and by gently rolling prairie” (City, 2015). However, having grown up in Joliet, myself, I cannot describe my hometown with the same beautiful imagery. My description does not include bluffs or vast prairies, but instead, is marked with smokestacks and odd smells, with farmland and forest/prairie restoration projects at the edges of town. The southern region of Joliet holds much of the city’s industry today, in particular a cluster of plants and waste sites huddled around the Des Plaines River, as seen in Figure 1, and spilling south and southwest into the nearby towns of Channahon, Elwood, and Wilmington, Illinois. Six of these sites will be examined for their toxic contributions to the environment and surrounding communities.

Figure 1.
Sites of toxic chemical releases are concentrated around the Des Plaines River near Joliet’s south side. Map: EPA Toxics Release Inventory (TRI) Program

Community Profile

Joliet has a long history of industry and manufacturing. Limestone was one of the first natural resources to be capitalized upon in Joliet in the mid-19th century (City, 2015). Waterways and railroads allowed the city to grow quickly, and in modern times, Joliet continues to serve as a corridor for freight, via rail, the Des Plaines River, as well as Interstates 80 and 55 (which happen to intersect at Joliet). As the City of Joliet’s website explains, “[the city’s] excellent rail-water-highway transportation system has brought industrial giants (such as U.S. Steel, U.S. Rubber, Caterpillar, and General Electric) to establish plants in the city” (City, 2015). Joliet’s economy has since changed with the times, with newer giants such as the Provena Saint Joseph Medical Center, two casinos, the Chicagoland Speedway (which also hosts music festivals), and other tourist/entertainment attractions. According to the Federal Reserve Bank of Chicago, “[i]n
1970, more than a third of Joliet’s population was employed in the manufacturing sector. By 2010, that percentage had fallen to 14 percent” (Longworth, 2014). However, the city’s transportation system continues to attract industry. According to U.S. Census Bureau data, manufacturers’ shipments in Joliet totaled more than $1.5 billion in 2007 (U.S. Census Bureau, 2015). While Joliet is currently experiencing the phasing out or relocation of some industry, its establishment as a transportation corridor still appears to thrive, with recent, huge projects like Center Point Intermodal Center and the impending renovation of historic Downtown Joliet’s train station into a multi-modal transportation center.

Joliet’s ethnic makeup has changed dramatically since the first European settlers called the river town home. Demographic data from the Federal Reserve Bank of Chicago’s Industrial Cities Initiative illustrates the shifts in Joliet’s racial and ethnic composition since 1980. According to the Industrial Cities Initiative’s report, “Joliet has become more diverse with an almost 100 percent increase in the Hispanic population since 1990, which now comprises more than 25 percent of the population” (Longworth, 2014). Other racial populations have not changed quite as much. 2010 data from the U.S. Census Bureau lists the Black or African American population at 16 percent and the White population at 67.5 percent; these numbers compared to the Industrial Cities Initiative report’s graphs show minimal change in Black or African American composition, with a significant decrease in the White population (U.S. Census Bureau). Another noticeable trait of the city is its relative separation of ethnic groups. The Industrial Cities Initiative report states that there are twenty racially concentrated census tracts in the city (half Black/African American, and half Hispanic), and “[o]f the 45 census tracts that are either partially or fully within Joliet city limits, 18 [of the twenty noted above] are primarily
concentrated on the eastern side of the city” (Longworth, 2014). Residents of Joliet can also point out that the dividing line between east and west sides of town is the Des Plaines River.

List and Discussion of Waste Sites

There are three National Priority List (NPL) sites, administered under the EPA’s Superfund program, located in Joliet. They are the Amoco Chemicals Joliet Landfill, and the Joliet Army Ammunition Plant (JOAAP), which in turn is composed of two NPL sites, the Load-Assembly-Packing Area and the Manufacturing Area. According to the NPL website, Amoco Chemicals Joliet Landfill, which actually is located in Channahon Township in Will County, was used from 1958 to 1976 for the dumping of chemicals and other waste:

About 5.9 million cubic feet of wastes from Amoco Chemical's manufacturing processes that include isophthalic, terephthalic, benzoic, toluic, and trimellitic acids, aromatic aldehydes, cobalt and manganese acetates, cobalt, manganese, cerium, sodium bromide, zinc, acetic acid, polystyrene, dimethylterephthalate, styrene, mineral oil, rubber, chromium, iron, and copper; activated carbon, construction materials, insulation, and general refuse (“Amoco”, 2012, p.1).

A list of toxins so long would make anyone cringe, but what is more disturbing is the proximity of the Amoco waste site to the Des Plaines River. The site is not only a mere 600 feet from the waterway, it is also reportedly “open to the river”, according to the NPL site’s most recent available update from December 2013, and has contaminated the groundwater as well (“Amoco”, 2012). The EPA is well aware of the potential hazards this poses to humans and wildlife, yet the community, in this case, seems oblivious to such danger.
The other two Superfund sites, which comprise the JOAAP, are located further south, reaching into the semi-rural communities of Elwood and Wilmington, Illinois. Now fully repurposed land, the JOAAP site was essentially an explosives factory, used during the mid-20th century. The Load-Assembly-Packing Area had been largely contaminated with trinitrotoluene (TNT), as well as other chemicals, heavy metals, and unexploded ordnance (“Joliet”, 2014). Sections of the old ammunition plant properties are now serving the Joliet area as home to the Center Point Intermodal Center; the Prairie View Landfill; the Abraham Lincoln National Cemetery; and the Midewin National Tallgrass Prairie, which recently became home to a herd of bison, as part of its restoration process (“Wilmington’s Midewin”).

The CDT Landfill, located in the southern part of Joliet and, also not far from the Des Plaines River, was a municipal solid waste landfill which operated in the 1980s and 1990s. Having lived less than a mile away from the landfill while it was open, just on the other side of Interstate 80, I clearly remember days when we neighborhood residents wrinkled our noses at the foul odor of rotting garbage. According to an order filed in 2002 by the EPA against the CDT Landfill Corporation, the company had failed to submit several reports regarding emissions and gas collections in the 1990s, in effect violating the Clean Air Act (U.S. EPA). The court order, however, states “no penalty is assessed”, due to the CDT landfill’s lack of funds. (U.S. EPA). The landfill was closed, and CDT wiped its hands clean of the violations.

As mentioned earlier, Caterpillar, Inc. was one of those “industrial giants” which provided thousands of jobs for people in and around Joliet. However, Caterpillar has been in Joliet’s headlines throughout recent years, often concerning worker’s strikes over wages and benefits. According to an article published in March in the Joliet Herald News, the corporation has announced its plan to move, putting 230 union production line positions on the chopping block.
(“Caterpillar”). This is the latest of many job cuts; today the Joliet Caterpillar plant employs 770 people, down from a whopping 7,000 in the late 1970s (“Caterpillar”). That’s only eleven percent, and soon to be less than ten percent. Joliet is losing jobs, sending them south of the border, where workers and communities in Mexico may be acquiring more air pollution as a side effect. According to the EPA Toxic Release Inventory, the Joliet Caterpillar site, located just north of the Des Plaines River, releases three chemicals into our air: Propylene, known to cause respiratory problems; Chromium compounds, the adverse health effects of which include cancer, as well as gastrointestinal, hematological, and respiratory problems; and Manganese, a neurotoxin (Toxics, 2015). So far, the public, even heads of government know little about the working conditions for the Mexican workers who will soon be taking over the production line jobs. State Senator Pat McGuire told the Joliet Herald News that a Caterpillar representative could not tell him what the wages in Mexico would be, nor if those workers will have a union (“Caterpillar”). With such economic and historical significance to Joliet, many locals look at this move as an abandonment. State Representative Larry Walsh Jr. lamented that Caterpillar was once the largest employer in Will County, describing the manufacturing facility a “mainstay”, and “part of how Joliet has grown” (“Caterpillar”). Joliet’s residents may be losing an employer, but the air may be a little bit cleaner for it.

Site Profile

Among Joliet’s present-day high-profile sites is the Midwest Generation coal plant, also located on the Des Plaines River, and less than a mile away from Caterpillar. The plant’s twin smokestacks (and their sulfuric plumes) are visible from almost any part of town. According to an article published in the Chicago Tribune in April 2013, Midwest Generation filed for bankruptcy protection about two and a half years ago, which helped the company to get away
with excessive sulfur dioxide emissions (Hawthorne). This had many residents worried: environmentalists were concerned about air and water pollution, and the plant’s workers fretted over the future of their employment. Later in 2013, the Chicago Tribune would report, Midwest generation was bought by NRG, a natural gas company based in New Jersey (Wernau). Unfortunately, the environmentalists are sometimes pitted against the plant workers in the news surrounding Midwest Generation/NRG, creating a constant tug-of-war over the importance of human/environmental health and economic security. Instead, perhaps this should be viewed as an opportunity to marry the two.

For many years, this and another Midwest Generation owned coal-fired power plant in the neighboring blue-collar community of Lockport, have been leaking contaminants into groundwater from stored coal ash, the waste produced from burning coal for electricity. It is explained in an article published on inIllinoisWater.org, which is a project of the Midwestern public interest organization Environmental Law and Policy Center, that a local environmental justice group, Citizens Against Ruining the Environment (CARE), has been on the forefront of this issue, and contends that energy companies such as Midwest Generation should be held responsible for their waste (Lydersen, 2012). Of particular worry is the fact that many residents depend on groundwater for household use and for drinking, and can not necessarily afford to purchase bottled water (Lydersen, 2012).

Figure 2.
The Joliet station has not had a good track record. The Toxics Release Inventory lists more than a dozen chemicals that this site releases into the land, air, and water, all of which are hazardous to human health, including three known carcinogens (Toxics, 2015). The majority of the generating station’s production-related waste has been released into the environment, with the quantity of treated waste shrinking over the past decade; in 2012 alone, seventy-nine percent -- a staggering 2,507,027 pounds -- of reported TRI chemicals were loosed to the land, air, and water (Toxics, 2015). Smokestacks are an icon of industrial pollution; the people who live near them and scientists, alike, have raised questions about the health effects of such pollution on adjacent communities. Particulate matter, which is released from combustion processes, is defined in an article in The Journal of Nanoparticle Research (2014) as “a complex mixture of ultrafine particles present in the ambient air, which causes adverse effects to environmental health” (Sambandam, 2014, p. 1). It has been found that “These nanosized particles are smaller than the size of the cells and cellular organelles, and allow them to penetrate the basic biological organs,
disrupt their normal functions, cause inflammation of tissues…leading to cell death” (Sambandam, 2014, p. 1).

While the conversion of the coal-fired plant to a natural gas one will lower greenhouse gas emissions, it does not necessarily solve pollution issues for this region or others. Natural gas is a fossil fuel, like coal, and must be extracted from the ground. The nation’s booming hydraulic fracturing industry is bringing about a whole slew of new concerns for water, land, and air pollution. Cleaner approaches to energy production would pull us away from fossil fuels altogether, and invest in renewables.

Conclusion

Joliet has evolved over time, both in landscape and culture. At one time its prairies and waterways served the Native Americans, until European settlers claimed the area for mining and mass transport. Today, the city is home to well over a hundred thousand people, virtually all of whom are the descendants of immigrants, or are immigrants themselves, making up a mosaic of ethnic and cultural diversity worth boasting about. Still strongly a blue-collar community, many of Joliet’s residents are reluctant to let go of the disappearing industries which once served as the backbone of the city. These days, however, the pollution-causing industries are often owned by companies outside of the city, as is the case with Caterpillar, and Midwest Generation (and now NRG). Although environmental justice issues have become more publicized, it is still apparent that when the local economy depends upon an industry, coal burning for example, those local workers tend to stand by those who provide their paychecks. But times change: Joliet, and the rest of the nation, is undergoing another phase of evolution (this time in the energy landscape and sustainable development), which will push us to innovate in new, often unfamiliar ways. Waste sites can be remediated and repurposed to serve the community, and the surrounding
environment, as was accomplished with the Midewin National Tallgrass Prairie. When the end of an era arrives, like that of the Joliet Caterpillar plant, the opportunity to grow other economic sectors opens up. As time passes, Joliet will acquire likely new nicknames and mascots to reflect its evolution -- perhaps full-circle -- from stones and steel, to bluffs and bison.
References


