

Cody Kater
Contaminated Cycle

Located in the center of the Lower Peninsula of Michigan, St. Louis has seen its share of people “just passing through”. The town’s motto, “Middle of the Mitten”, explains where the community of 7,482 people can be found, but it does not offer reasoning for how the town has found itself in a multimillion dollar controversy (1). A storm that has created a stigma that seems to loom around the surrounding area never fading away. To understand the issues better, one must understand the importance of the history of the area first. It has been many years since the town first realized the issue of contamination but the impact has greatly affected the people of the community in different ways. The population never seems to grow. Is it because the people of the town can’t find the money to escape the pollution? Do the people throughout the community feel the grind of toxin talk? The people of St. Louis have had to overcome a lot but are they ready to move on? The stigma of the “Middle of the Mitten” community is alarming but with the trouble in the past, it’s time to understand how the community is staying optimistic and striving for change.

The Pine River is a watershed located in the center of the lower peninsula of Michigan that runs through St. Louis and the neighboring city Alma. It is 427 square miles and 51 miles long (1). Because of its length, the river can be broken into different sections. The first section is one that runs through areas that have stayed untouched by humans and an abundance of wildlife can be found. The river then begins to run through Alma and eventually into St. Louis,

where it is the most contaminated. Today it is an area that is one of the most contaminated and expensive cities in U.S. history (6). Although it is a very contaminated area now, the Pine River has been an important river attracting many settlers to develop their homes in the surrounding area. In the 1800's settlers used the Pine River specifically for logging (3). Michigan attracted many lumbering companies and many of them found themselves settling throughout the Pine River and Saginaw Valley area. Many small lumbering villages were developed on the shores of the Pine River in St. Louis. As lumbering helped spike the area's economy, clear cutting resulted in people finding other career paths through farming and factory jobs.

In the 1930's a chemical plant found its way to the banks of the Pine River in St. Louis. The Velsicol Chemical Corporation, formerly known as the Michigan Chemical Company, opened its doors in 1935 and focused on the production and manufacture of salt products (3). In 1944 the company began to do serious research on an insecticide DDT. The insecticide would help kill off certain insects. DDT contributed to the safety and comfort of the armed forces during World War II (3). Throughout the 1950's and 1960's the chemical company expanded to a 52 acre plant containing many different tanks and buildings. The company had been dumping money into the area's economy. But by the 1960's, DDT was under scrutiny. Rachael Carson addressed the problems of DDT in her book *Silent Spring*. She explained in many different ways why it hurts our environment and the animals living throughout it. Carson builds a method throughout the book that springs will be silent due to DDT. Birds will no longer be chirping and their songs will not be heard because of the birds eating worms and insects that come from the

toxic land. DDT was not only used for World War II efforts, it was also used as a chemical to keep insects from killing farmer's crops. Animals that consumed the insects in which were infected with the chemical were being found dead. Throughout the twentieth century the pesticide was being sprayed over millions of acres of farm land. In 1964 the production of DDT was halted and by 1973 it was banned (3).

The company then out of the DDT-making business and turned to a new chemical: PBB, a chemical compound not to be consumed by man or beast (3). As well as PBB, they manufactured Nutrimaster, a supplement cattle feed. In 1973 tragic mix-up occurred that concerned people statewide. PBB was mixed with the Nutrimaster bags and distributed throughout the state. Hundreds of thousands of cattle had to slaughtered and buried in pits (3). Because of those cattle and other farm animals, 9 out of 10 people in Michigan had consumed some type of PBB (6). Series of investigations followed and an estimated \$200 million in lawsuits were instituted. In the aftermath the plant closed in 1978.

The series of investigations into the plant did not go away for many years. The Michigan DNR continued to monitor the river and in 1994 found samples of fish tissues with a high level of DDT, even after the manufacturing of it was banned (3). More investigations found that the river sediment along the banks of the plant had 4% DDT (3). As a solution, three feet of clay were layered to try and cover the contaminated ground along the shore where the plant meets Pine River (6). In 1991 the chapter of contamination was re-opened and has yet to close. The

Pine River Superfund Citizen Task Force was created and continues to do research on the area that was destroyed by the plant.

Today nothing can be found at the company site. A chain linked fence wraps around all of the 52 acre property and with signs litter the area posting “WARNING: DO NOT ENTER.” Throughout the environment chemicals can be found. In the Pine River DDT and PBB remains, DDT is found in birds throughout the area, and other chemicals that are by-products of PBB and DDT are found in drinking water (6). Contamination of the plant is not only found in the river and plant site. The stigma that floats over St. Louis remains for good reason. DDT contamination can be found in lawns that run up to the river or near the old plant site. A resident of St. Louis finds up to 12 dead robins in her lawn a year (6). After speaking with scientists at Michigan State University, she began to wrap the birds in plastic bags and put them in the freezer before getting them tested. The results were incredible. According to John Buckweitz, who heads the toxicology department at Michigan State University, “Tests on the birds in Kniffen's (the resident) yard in May revealed DDT levels at 100 to 1,000 times the amount found in other birds” (6). The birds are contaminated by eating the worms that are located in the lawns that are near the old plant site. The same resident explained the difficult time she has had when trying to sell her home and move out of the contaminated area. “No one would even look at it” (6). That same result can be found today. Many homes are for sale throughout the community and different pieces of land along the river can be found for a low price. For example a lot just north of the plant across the river can be bought for \$30,000 (5). Meanwhile the same size lot down

the river in Alma, many miles away from the contaminated site was bought for \$131,000 in the past year (5). Different factors go into property cost, but the fact that a piece of land on a river, across from a park, goes for dirt cheap cannot be excused.

St. Louis can be described as a small quiet town full of good people. There are children running around in the neighborhood and a sparkling water-way out of the front door for many people. Kniffen, a resident for 16 years, explains what she believes through her eyes, “But the “NO FISHING SIGNS” and orange fencing around the contaminated plant sites that scream toxins have a way of grinding you down” (6). The three feet of clay that had been layered to try and cover the contaminated ground along the plant site has begun to crack resulting in different type of problems for the entire community (7). A by-product of DDT has been found in drinking water throughout the town (pCBSA is the chemical found in drinking water and is tough to treat) The chemical is part of sludge that drips into wells of drinking water making it very tough to locate and wipe out (6). The sludge is also capable of soaking in the soil of a river bed and then getting consumed by fish. The city now has to find ways to reconfigure much of the city’s water infrastructure. With drinking water being harmed, the city’s property value are down (1). Also the state has issued a “No Consumption” rule on fish around the surrounding area of the plant and downstream. All these different factors help fund the stigma of St. Louis, Michigan.

Many organizations have been developed to help the cleanup efforts. The total cost for the plant clean up is estimated at \$374 million dollars (6). In the beginning the Velsicol plant

wasn't originally ordered to pay for the damage it had done. It was thought at the time the DDT would eventually dissolve over time so EPA ordered to slap 3 feet of clay over the bed. As DDT was being found in fish throughout certain hot spots, the Velsicol plant was ordered to pay for the clean up on any place testing over a certain amount of ppm (7). More and more money is being dumped into the relief efforts but it is seen as a contamination cycle that may never end. The process of cleaning has been slow and will continue to be. The large site and the large number of toxins make it difficult to manage. Some pollution will remain many lifetimes but they will be contained. The process of taking certain chemicals to break down toxins into non toxin derivatives is a costly one. The speed of the process will depend on the speed of federal dollars and efforts provided by the Citizen Task Force. Many local organizations have been formed to help the efforts but the Citizen Task Force is the largest one doing the most for the environment and community needs.

The stigma that stays afloat over St. Louis is there for good reason. As the good people of the community try to move on from the contamination, it's hard to understand how one community could get so abused. The town has done everything it can. With the plant shutting down and over 300 union workers being laid off the town had to come together to try and keep the economy afloat. Three different correctional facilities found its way to the city limits by the late 1990's. Bringing in these facilities help give jobs to the people of St. Louis and help pump money into the area. Also by 1997 different storefronts in downtown started to fill up while different businesses were being developed throughout the industrial park (3). By 1997 different

parks were also beginning to be developed throughout the town (3). With the Superfund site being contained, the citizen task force has developed a new conceptual plan to reuse the old Velsicol site (2). The plan is to fill the 52 acres with a community park, amphitheater area, and a large recreational field (2). Being home to a large Blue's festival every summer the amphitheater and park could be put to good use showcasing the town's waterway through downtown. Though the idea was developed in April of 2004, no construction has yet to happen.

The stigma of the "Middle of the Mitten" community is alarming but with the trouble in the past, it's time to understand how the communities are staying optimistic and striving for change. Chemicals filled with DDT and PBB have controlled the outlook on St. Louis. After 30 years of the plant being shut down, dead birds are still showing up in front yards, it is not safe and illegal to fish the rivers, and drinking water is polluted. If one was to grow a garden, how polluted would it be? If one wanted a pet dog, would it have to be put down after eating a certain piece of grass? Though the community of St. Louis is pushing forward, it is still important for the people to understand what has happened to their environment and how serious of a case it is.

Work Cited

1. Carson, Rachel. *Silent Spring*. First Mariner Books. 2002
2. City of St. Louis Statistic found on their website. <http://www.stlouismi.com/1/stlouis/files/landuse.pdf>
3. City of St. Louis' plan to reuse the Velsicol Plant site. <http://www.stlouismi.com/1/stlouis/files/VelsicolReportFinalJuly2004.pdf>
4. City of St. Louis History by decades found on their website. http://www.stlouismi.com/1/stlouis/history_by_decades.asp
5. City of St. Louis Timeline found on Alma Colleges website
6. Home values found on zillow.com. http://www.zillow.com/homedetails/504-W-Prospect-St-Saint-Louis-MI-48880/2114937175_zpid/
7. Erb, Robin. "Living with PBB: Michigan Chemical plant dumped poisons, impacting town for years". Detroit Free Press. September 2012
<http://www.freep.com/article/20120924/NEWS01/309240082/Living-with-PBB->
8. Years-of-dumping-poisons-a-townSnedeker, Suzan. "View from the Pine River and Beyond: The Legacy of DDT Use and Health Effects". Cornell University. Spring 208