

Velsicol Superfund Site

10,000 years ago when the last great continental glacier melted, and retreated across what is now known as Michigan, all of the rivers and lakes we know today were created. The Pine River located almost directly in the middle of Michigan was formed the same way. “The Pine River sub-basin (or watershed) is 427 square miles in size along its 51-mile length” (1). The Pine River begins in Mecosta County and runs alongside the Montcalm County border before going directly through Gratiot County. The Pine flows through Alma, MI and St. Louis, MI before meeting up with the Chippewa River and dumping off into the Tittabawassee River. From there the Tittabawassee flows directly into Lake Huron. The Pine River has been an important river since settlers came to these parts hundreds of years ago. Loggers in the late 1800’s used the Pine River extensively for logging. There are many small villages along the Pine River and they can be traced back to when loggers settled those areas. The Pine River used to be known for logging and clear waters. Today it is known as one of the dirtiest and most contaminated sites one can find. The Pine River is home to one of the most expensive “superfund” sites in US history.

The Pine River can be broken up into 3 sections. The first section is heavily wooded with clear waters. Great fishing and an abundance of wildlife are prevalent. This part of the river is fed by fresh springs and local lakes. The 2nd section of the river is where things change. For the first time the Pine River runs through “cities”. As it passes through Alma Michigan, the river is dammed up which slows the flow of the water and increases water temperature. This section of the river is fed mostly by rain fall and farm

runoff. 6 miles farther down river is St. Louis Michigan. Located in St. Louis is one of the most contaminated sections of river one can find. So contaminated that people have not been allowed to eat fish out of here, or swim in the river for over 30 years. This is a river that runs directly through a city with a population of nearly 7,500 (2). This contamination is all due to the greed and ignorance of the people. The impact we have on our environment is so much more than what we see today or tomorrow. The effects left by the Velsicol Chemical Corporation (formally known as the Michigan Chemical Company) are so prevalent in St. Louis 30 years after they are gone, this city and the Pine River that flows through it will never be the same.

The Velsicol Chemical Cooperation opened its doors its main plant site in 1936 on a 52-acre site located directly on the banks of the Pine River located right in the heart of St. Louis. Velsicol made a number of different chemicals at this site, but most notably they were global producers of DDT and PBB. DDT is a pesticide, which was being sprayed all over the place without regards for its impact on nature during the mid 20th century. DDT was the center of Rachel Carson's controversial best selling book called *Silent Spring*. Carson addressed the problems that such pesticides such as DDT have on our environment and the animals living in it. "The history of life on Earth has been the history of interaction between living things and their surroundings" (3. Pg. 2). Carson describes a silent spring, as something that we will soon face as no birds will be chirping anymore on spring days. Their songs will not be heard because they will be dead. Dead from the pesticides and contamination they eat when eating the insects they live off of that are sprayed with DDT.

Velsicol Chemical Company had been disposing of toxic waste into the rivers for most of their time at the St. Louis site. They had been dumping DDT and PBB into the river with no regard of what they were doing to the river and the people who live there and drink that water. Light was not shed on Velsicol Chemical Company until a huge mistake in 1973. “Velsicol result of Michigan Chemical -- the plants responsible for a shipping mix-up in 1973 that set off one of the largest agricultural disasters in U.S. history. Accidentally mixed into cattle feed, the flame-retardant polybrominated biphenyl, or PBB, led to the deaths of tens of thousands of cattle and other farm animals and it ended up on the dinner tables of nine out of 10 Michiganders.” (4.) While workers were on strike, the foreman for Velsicol continued to work and produce many different chemicals. Not being as familiar as they should have been, they accident added PBB with what was an additive for cow feed. This huge mistake was the downfall of the Velsicol Chemical Company. They were ordered to shut their doors and tear down the sight, capping it with a 36 in layer of clay to try to cover the contaminated ground (5.)

Today nothing stands at the site, all that can be seen is a large chain linked fence wrapping around all the 52 acres. The fence is riddled with “WARNING: DO NOT ENTER” and “WARING: HAZERDOUS MATERIAL” signs. The twelve foot fence contains what most people passing through, unknowing of what it really is, may think is a landfill. But what Velsicol was dumping into the river for more than 30 years was way worse than a landfill. The actual amounts of chemical waste dumped into the river, from the shores of the Velsicol main plant are unknown, but the effects of their misuse for the land can be seen vividly today.

“The plant's environmental footprint remains: DDT in dead birds; PBB in the Pine River; pCBSA, a by-product of DDT, in the drinking water” (4). The DDT contamination from Velsicol can even be found in the lawns of the houses near the 52 fenced in area. Teri Kniffen, a resident of St. Louis lives near the old plant and said every year at least 10-12 robins can be found dead in her lawn. So she began to keep the dead birds, wrap them in plastic and get them tested. The results were staggering. “Tests on the birds in Kniffen's yard in May revealed DDT levels at 100 to 1,000 times the amount found in other birds, according to John Buchweitz, who heads the toxicology section at the Michigan State University Diagnostic Center for Population and Animal Health. He tested the birds at the state's request” (4). The birds are getting this contamination from the worms in which they are eating from the contaminated soil left by the old Velsicol Chemical Company.

When they were ordered to shut down, tear down and cover the whole 52-acre site with 36 inches of clay, Velsicol just left not having to deal with the aftermath that their decisions had on this community. That 36-inch layer of clay is now starting to crack and leak contamination into the Pine River through the ground leaving the city with a world of problems. Chemicals have been found in their drinking water and a massive effort is in place to clean up the drinking water for their residents. Property value in the city has plummeted. Houses for sale anywhere near the old Velsicol site are nearly unsellable. Vegetation does not grow and birds are dying in people's yards. The state of Michigan issued a “No-Consumption” rule for the fish in the area of the site and downstream some thirty years ago and that rule is still in effect.

The Velsicol Chemical Company was not originally ordered to pay for any of the mess after they agreed to close down under the Consent Agreement (5). They built a wall around the facility and buried the 52 acres under clay. They were not originally ordered to pay money because at the time it was thought that DDT sediment in the river gradient bed would simply just dissolve over time. This was drastically not the case. As DDT was starting to be found in tested fish from the area, testing was done near the Velsicol plant where hot spots of DDT measured upwards of 30,000 ppm. They were ordered to pay on any place testing over 3,000 ppm.

Clean up efforts have been under way for the last 25 years on the contaminated site. “The episode known as “Cattlegate” and this town of about 7,000 make up a classic story of environmental poisoning: an industry long gone, the persistence of the chemicals it leaves and the complex environmental cleanup that can drag on for years” (5). The expected total price for the clean up of the Pine River from the Velsicol plant is 374 million dollars. Some will say that state and federal legislators overlook the clean up efforts and the funding they need to keep them going. Residents of St. Louis would like something done about the water they drink, which contains chemicals. They are swept under the rug though. Being raised about ten miles up river from the contamination site, I have heard stories of the site my whole life. My father grew up in the 70’s and knew many of people that worked for “Michigan Chemical”. “Everyone around here knows about the contamination the workers there faced. Half of the guys I know that worked there are dead from cancer” he said. Some people may not clearly see the effects our actions as humans have on our environment, but I grew up with

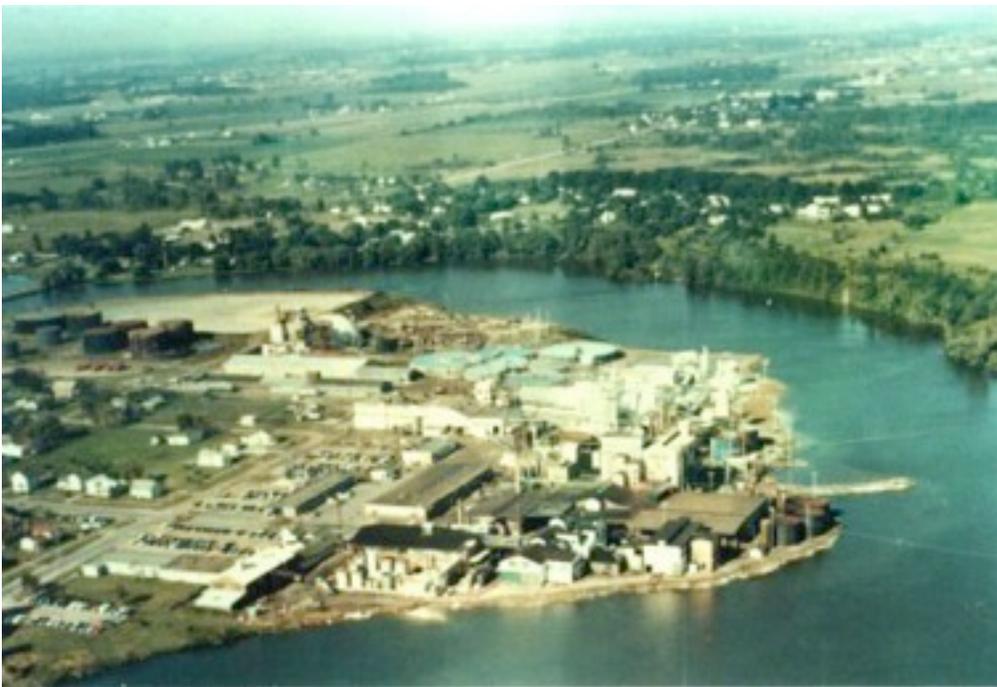
them everyday of my life. As kids we never drank water from St. Louis, we never swam over there or fished over there. The town had almost a stigma over it and still does to this day. The wildlife is depleted and things just are not as green. The actual site is one of the first things your see when you enter St. Louis coming from the west on M-46 into town. Hopefully in time the clean up efforts will be complete and the city can start to enjoy a contaminated lifestyle for the first time in nearly 100 years.



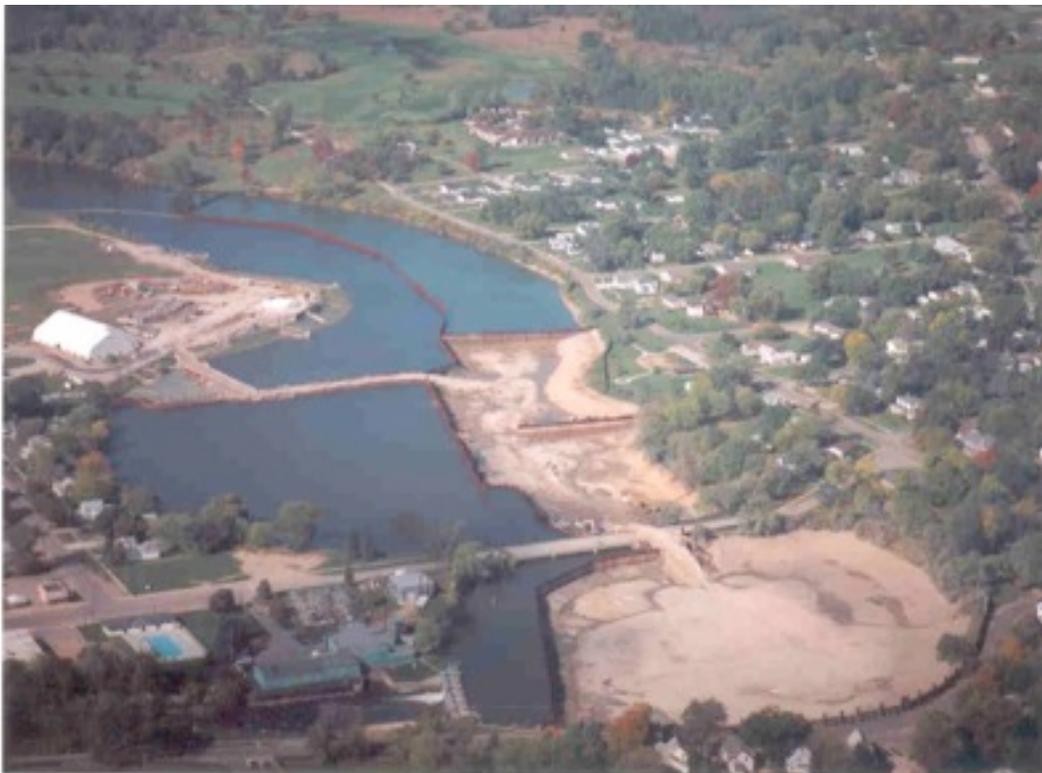
PINE RIVER BASIN
 DRAINAGE AREA: 427 sq. mi.







(Below, Velsicol site at it looks today)





(Above, Reverse angle of present day site)



Work Cited

1. http://www.geocaching.com/seek/cache_details.aspx?guid=ccef2aeb-896a-4514-95b2-a14d3808e5e4
2. 2010 US Census
3. Carson, Rachel. *Silent Spring*. First Mariner Books. 2002
4. 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-Years-of-dumping-poisons-a-town>
5. Snedecker, Suzan. "View from the Pine River and Beyond: The Legacy of DDT Use and Health Effects". Cornell University. Spring 208
<http://envirocancer.cornell.edu/Newsletter/articles/v13DDTLegacy.cfm>