When I came to Miami, Oklahoma, it was as a student with a class from Miami University, Oxford, Ohio participating in an ethnohistory project with the Miami Tribe of Oklahoma. Early in this experience, I realized that there was located in this area many environmental issues that were greatly impacting not only the Miami Tribe, but also other tribes located in the surrounding cities of Picher, Commerce, Cardin, and Quapaw, as well as, extending even beyond their borders. This area is an Environmental Protection Agency Superfund Site covering a 40 square mile area brought about by the mining of lead and zinc, which started in the late 1800s and lasted through the 1970s.

First, I would like to give a brief history of the Native American populations that are located in this area, which is known as “Indian Territory” and is composed of many different tribes. Second, I would like to give an explanation of the current conditions and a brief historical background of the mining operations that have led to the environmental degradation of the land, water, and air problems associated with mining in northeast Oklahoma. Third, I would like to give voice to the Native American people affected and the various responses to health issues resulting from mining, as has been related to me verbally, as well as, information I gathered through research and observation. These voices reflect varied and often controversial views.

My intention is to raise awareness of the environmental issues that tribes are faced with today. In order to explore these issues, where appropriate, I have opted to quote anonymously those individuals who have shared with me their views. In the case of the various organizations involved, their names are correct as stated.

Ottawa County is located in the northeastern corner of Oklahoma and is bound by the states of Kansas and Missouri. Residents in this area are descendants of tribes who had been relocated to Oklahoma after ceding
tribal lands to the United States through treaties in which they agreed to move to lands reserved for them or assigned to them. Many of these tribes had been indigenous to lands in Ohio, Illinois, Indiana, as well as, Southeastern states. With the westward movement of the white settlers and government policy to expand its interests, tribes underwent forced removal and relocation, which was nearly complete by 1874.

Today, the Seneca-Cayuga, Eastern Shawnee, and Quapaw are the only tribes of this area who own any appreciable amount of trust land. The Quapaw own about 70% of the land affected by the mining of lead and zinc. The Quapaw had long used this area for hunting and fishing before being moved to northeast Oklahoma with the Treaty of 1833. Negotiations by the government were begun in 1833 to remove the Miami from an estimated 800,000 acres in Indiana and by 1840 the Miami had finally ceded the last of their tribal lands and were forced to relocated to Kansas. In 1867 they were moved to Oklahoma with the Omnibus Treaty.

Within a few days of my arrival at Miami, I went out to drive around and get a feel for the surrounding area. That was how I first came upon Picher, located just a few miles northwest of Miami, and discovered the ominous gray mountains of chat (mine tailings) that stand interspersed with small, often run down, houses and trailers just at their bases. The town of Picher has the weathered look of a long ago abandoned prosperity that can be seen in the various empty buildings in differing states of deterioration. As I drove on, I passed the fenced area of crisp white mobile offices of the EPA and the large sign on one building in bold black letters that read, “Tar Creek Superfund Site.”

Picher is reported to have had a population of 30,000 as miners converged on the area and built the mining camp in the heyday of mining. This was a unique time in the history of Oklahoma, before becoming a state in 1907, all the land was entirely owned by Indians. A Cherokee tribal member related to me:

Oklahoma became a state in 1907 and was no longer Indian Territory in 1915. My Grandfather died in 1929 and never wrote Oklahoma, he always used Indian Territory.

Tribal land had been held in common by members of the tribe and was considered sovereign, although still subject to federal regulations. Any intrusion by non-Indians was an illegal act under the existing treaties. By the time of statehood many Indians were given land with negotiable titles
through an allotment system. The allotment system allowed the government to create surplus land that was then made available for white settlers by giving much smaller tracts of land for each tribal member rather than dividing the entire reserved land. The tribes lost significant amounts of land through the allotment system. Mining entrepreneurs saw an opportunity to gain riches from the mineral resources located in Northeast Oklahoma. It was a furious time of exploitation and Indian Territory soon became infiltrated with many intruders. An article in the Miami Record-Herald, November 12, 1915 states:

Some of these lands so long held in trust by the Government for its Indian wards, contain vast deposits of zinc and lead. The richness of the ore found there is attracting mining men to the locality and the great prairies of Oklahoma are undergoing a wonderful transformation. Busy mining towns and camps have taken the place of grazing herds and gigantic tailing piles have taken the place of the prairie dog mounds of other days. Instead of the Indian teepees there are modern concentrating mills producing enormous quantities of zinc concentrates, and now instead of being classed as an agricultural state, Oklahoma is entitled to a place of prominence among the mining states of the American Union.”

This era once again brought about a conflict between the goals of industrialization and the preservation of the Indian way of life. Often Indian land was obtained illegally by changing Indian names on land titles by unscrupulous speculators and squatters simply moved onto Indian land.

Although there had been some mining of out-croppings around the area in the late 1800s it wasn’t until 1905 that zinc ore was found and shortly thereafter the first large scale mining of zinc and lead began northwest of Commerce with the establishment of the Commerce Mining and Royalty Co. The towns of Picher and Commerce are part of the Tri-State Mining District composed of southeast Kansas, southwest Missouri, and northeast Oklahoma. In Ottawa County the site is known as the Picher Mining Field and consists of the towns of Picher, Cardin, Quapaw, Commerce and parts of North Miami.

In 1979 acid mine drainage began to flow to the surface from abandoned mine shafts and boreholes that had filled with ground water after the mining pumps were shut down and contaminated water began discharging into Tar Creek. The site was added to the Superfund National Priorities List in September of 1983 and was considered one of the largest and worst Superfund sites in the United States. A superfund site is defined as an abandoned site — such as land fills or illegal chemical dumps which create
a pathway for environmental degradation and a threat to human health — by the industry that created the problem.

The greatest amounts of contaminated acid mine water from heavy metals of lead, zinc, and cadmium are found in the shallow Boone formation where there is considerable lateral migration effecting approximately 76,000 acre-feet. The mining operations left unfilled mine caverns, shafts, and bore holes that have subsequently filled with ground water, with a range from 90 to 320 feet below the ground surface. Below the Boone formation is the Roubidoux Aquifer located approximately 1,100 feet below the ground surface and is the formation that drinking water is drawn from to service local towns and rural communities in Ottawa County. The Oklahoma Department of Environmental Quality (ODEQ) is doing studies to determine if the Roubidoux Aquifer is being affected with contamination from faulty casings of bore holes and leakage from abandoned wells connected to the aquifer. To date eighty-three boreholes have been plugged in an attempt to prevent contamination. In August 1985, the town of Picher required emergency water supplies, the EPA plugged the contaminated well and drilled a new one and water quality was restored. In 1995 the USGS studied ten wells in the municipalities and rural areas and seven showed definite contamination; the other three showed some signs of contamination.

After the mining companies shut down, many independent contractors went into the mines, before they began to fill with water, and mined out the 25x25 foot pillars that had been left to support the upper ground levels. In places, the surface ground area is collapsing and it was reported to me that Picher had to abandon the old main street due to the sinking ground. At the Mining Museum in Picher, I was told of a man whose whole house had sunk into a hole just a few blocks from where the museum is located.

Today, as you drive through Picher you see mining wastes, called chat, piled to heights of 100 feet around the town. These were created from the mine tailings and original negotiations with the Indians and their Bureau of Indian Affairs representatives allowed these tailings to be left with the idea of selling them at great profit for use as fill material and surface gravel. Restricted or Indian land has had a moratorium placed on the sale of chat, while those who now own unrestricted lands are still continuing to sell it at elevated prices. One Cherokee tribal member expressed the following.
See this sign here, “US Property, No Trespassing”, that means this is Indian land. This metal post with barbed wire fences with the signs is Indian land. All the Indian land is fenced, so you can see the land that is not Indian is not fenced. This is Indian chat and that is non-Indian chat (pointing to a non-fenced area). The BIA has a moratorium on the sales of Indian chat, so the Indian chat just sits there and washes off. You can see the erosion on the piles... when the Department of the Interior talked with the Indians about leasing the land to mine companies they were promising them percentages for the first two or three years. As it turned out, they did get percentages but it was less than they should have gotten. Within about three years the Department figured out a way to stop payment flow and it eventually dried up. Plus, in the leases in order to accommodate the mine companies they allowed them to leave the chat and tailings piled up on the ground rather putting them back down the hole or cleaning up the site. They justified it to the Indians as they would all be in the gravel business.”

Early use of chat included surfacing of roads and building ballasts for train tracks in the mining area, but this quickly began to spread to use on public roads, as well as, general fill material in residential areas such as playgrounds, driveways, and parking lots. Chat has been used to mix with concrete, bases laid for building houses on, fill around pipes and culverts. In some cases, it has also been used for sandblasting. This same tribal member went on to tell me:

They are building new homes with chat as we speak. They have not stopped using chat. There are no ordinance regulations on the state, county, or municipal level to stop contractors and builders from using chat. They are still using chat, the county, they are all using chat. So, the EPA is digging it up while they are laying it down. They’ve spent 30 million dollars trying to clean it up. All the while, all the little governments here are continuing to lay it back down. The EPA has been trying to tell the counties and municipalities that they shouldn’t use the chat. That they should buy limestone for their gravel work and these government entities have said they are not going to stop using chat, because they cannot afford limestone like other city and county governments. So, EPA hauled limestone into this location, over here, and they make it free for the county and municipalities to use. All they have to do is drive in here and get it and yet they are still using chat.”

Mining waste is exempted from federal regulation. While states have some ability to regulate, it is primarily the cities and municipalities that can set ordinances.

The U.S. Public Health Service’s Indian Health Service, located in Ottawa County has reported that 38% of the 192 Native American children tested had blood lead levels higher than the 10 micrograms per deciliter. This puts these children at a higher risk of attention deficit disorder, hyper-
activity, delinquency, and reduced learning abilities. Lead can be linked with tooth decay at levels of 5mpd. Unfortunately, there are few studies done on the effects of lead in older adults. It is known that lead can stay in the body and greatly effect the fetus of pregnant women years later. There is an increased problem of kidney disease, as well as, lung problems from inhalation of silica and quartz particles that blow off the chat piles. I was informed by a Cherokee tribal member that when the emergency response branch first came into the area, the EPA did an air sample to see if there was air born heavy metal contamination in the air:

They (EPA) said they didn’t find significant levels of lead and cadmium in the air... but... on the side to me, the person who did the sampling said silica was off the scale. But, he said he didn’t report it because he wasn’t instructed to. They were only testing for lead and cadmium. So, the EPA is not going to do a silica test.

One of the most amazing aspects of this whole issue is that these chat piles have long been viewed as a recreational area. In an article in the Tulsa World, July 23, 1967 it was written:

Today the mountains of gravel make excellent testing grounds for hot rods and offer good spots for motorcycle climbs. How about a wiener roast on a small plateau halfway up the side of a pile of gravel? A lover’s lane...? You betcha. Your graveled driveway has a low place? Just drive a short distance for a pickup load of replenishor.

I heard this statement by one local and was completely struck with the weight of it:

This is the only Superfund Site that I know of that is used as a playground.

On one of my drives through the chat piles, I witnessed two kids riding four wheelers up and over one of these chat piles, with a gray dust cloud spiraling and swirling upward as they disappeared to the other side. Recent footprints and slide marks on the sides of these giant slopes can be seen any day of the week.

While interviewing a couple of high school students from Miami High school, I asked if they had ever seen any wildlife in or around the chat piles, and they both said, “no.” One young man, Arapaho, said:

I used to swim in it (Tar Creek). There are no fish, but I’ve seen snakes, probably about three years ago. I have five bothers and sisters, I have been tested for lead, but it was not high. They haven’t been tested.
I asked him about the community and their awareness of contamination within the area and his reply was:

About forty percent don’t believe it is contaminated. Probably only ten to fifteen percent care about the issue and the rest do not. Some don’t even know it’s contaminated.

This is not just a Native American problem, but affects all residents of the mining area. However, with the population in and around the Picher Mining Field being made up of an estimated 40% or greater of Indian descent, it is not surprising that a number of dedicated Native Americans have taken active roles in addressing these issues. There has been formed an Inter-Tribal Environmental Council, which is a consortium of 34 tribes in Oklahoma and Texas who address not only Tar Creek, but other environmental issues across the region.

At the Miami High School you will find the Cherokee Volunteer Society, made up of 45 students, who are working on the Tar Creek Project. Tar Creek runs just two blocks away from the high school. Students were trained to test water by the Oklahoma Water Resource Board and monitor water in Tar Creek, Spring River, and the Neosho River, but this project has been stopped due to exposure to contamination. They are working to raise community awareness of the health hazards they are being exposed to. One way they have done this is by sponsoring a Fish Tournament on Tar Creek. Of course, there are no fish in Tar Creek due to the acidity of the water. Presently they are working to place signs around the chat piles alerting people to the health hazards they are being exposed to by playing there.

In addition, a group has been formed called the TEAL Project (Tribal Efforts Against Lead) which is made up of advisors referred to as Clan Mothers and Clan Fathers. They spread word to tribal families, as lay health advisors, about the dangers of childhood lead poisoning. They work in conjunction with Indian Health Service, Ottawa County Health Department and the University of Oklahoma Health Sciences Center. Focus is on increasing understanding of the problem of lead poisoning; how to prevent or reduce lead exposure in children; sharing information with families to encourage the use of poisoning prevention methods; and encourage the parents to have their children’s blood tested for lead on a regular basis. Activities are directed towards parents and caregivers of young children who live in Ottawa County and are American Indians.
At a grass roots level there is a group called the L.E.A.D. Agency, Inc. (Local Environmental Action Demanded). Along with Tar Creek Superfund Site, they work to educate the community on environmental issues affecting Northeast Oklahoma. They actively pursue raising awareness at the community level and work towards implementation of counter actions on the hazards that put their community at risk for exposure to contaminants.

Today, this 40 square miles of “Indian Territory” which use to be a land of prairie and teeming with wildlife, now poses a threat to human health. With so much emphasis on ecological issues and ecosystems needing to be brought back into balance, Tar Creek still remains polluted with acid water; chat piles loom on the landscape; birds are not heard chirping amongst these gray mountains; blood lead levels are still high in children; and to date, no real studies have been done on adults in the area. This “twenty year old environmental hazard” on Indian lands speaks loudly of exploitation, environmental injustice, and continues to pose a threat to the health and well being of Indians in northeast Oklahoma.

REFERENCES


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