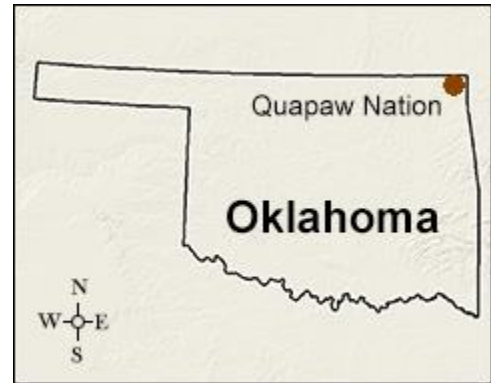


# Prairies Region

## Quapaw Nation

### The Quapaw Nation

The Quapaw Nation, located in northeast Oklahoma and bordered by both the Kansas and Missouri state lines, has an enrolled population of approximately 5,500 members, with about half living within the exterior boundaries of their jurisdiction and half scattered throughout the region and country. Dating back to the early 1900s and spanning until the 1970s, mining of lead and zinc have left deep scars on the land. Lead and zinc were used in both World Wars I and II, but the tailings locally known as chat can be blown from the earth into the air and washed into waterways. These highly toxic, fine particles of lead and zinc negatively impact the regional air quality as well as stream, riparian, and upland areas, where tribal members go to collect water, soil, and plants for both subsistence and cultural practices. Fine particulates in air and water are invisible to the naked eye, making it difficult for people to recognize the threat and dangers until damage has been caused.



*Depiction of No Trespassing sign in foreground and contaminated land as part of the Tar Creek Superfund Site. Photo courtesy of Quapaw Nation.*

The Tribe's interest in environmental work was formally established in 1998, with the original focus being the remediation of the Superfund mining sites as well as looking at the cascading environmental impacts from the chat material that had been scattered across the land in large piles. While there was only one known smelter facility on their lands, the hundreds of millions of tons of chat material had clear environmental impacts. It was through these beginnings that the Environmental Department began to see interest from other departments on environmental concerns that had cross-departmental impacts, and from there the discussions

led, unsurprisingly, to the changing climate and its impacts on the land.

The Tribe has a personal stake in cleaning up the land and protecting it into the future; the land belongs to them in perpetuity through treaties signed beginning in the early 1800s. Climate change is proving to be a deeply complicating factor in the Tribe's remediation efforts of the Tar Creek Superfund Site: extreme increases in rainfall can make it impossible to run bulldozers or excavators, and yet the risk assessment models that generate Records of Decision require removal of contaminated materials to certain thresholds. Flooding undercuts the land and exacerbates subsidence at former mining sites, introducing toxic materials into waterways and damaging infrastructure and vital farmland.

Years with extreme rainfall (365 consecutive days from 2019-2020 saw over 80 inches of rainfall, which was 30 inches above average) are then juxtaposed with seasons of drought. One of the Tribe's growing entities is the [Quapaw Cattle Company](#). This hormone-free cattle operation is dependent on crop production and pasture location. Shifting rainfall patterns, intensity, and amounts complicates their planning efforts for timing of planting and harvesting.



*Photo courtesy of Craig Kreman, Quapaw Nation Environmental Office*

### **Emergency Management + Environmental Department**

The overarching approach that the Quapaw Nation is taking to account for climate change is in their Emergency Management planning. The Environmental Department Office is funded entirely through the EPA, but has started to work with the BIA to open up different avenues to address climate change by building capacity through workshops, attending conferences and participating in trainings, and working with expert consultants.

In 2016, the Tribe's Department of Public Safety Emergency Management officer looked into and received a FEMA grant to create a hazard mitigation (HazMit) plan. This grant allowed the Tribe to hire a consultant to develop the more technical aspects of the plan, such as elements involving in-depth GIS mapping, data collection, tabulation, and graphing. FEMA had recently begun requiring the inclusion of a climate aspect in HazMit plans, and by October 2017, the Quapaw Nation achieved the significant accomplishment of becoming one of the first to incorporate climate into their plan and have it approved.

Chapter 5 of the Quapaw Nation's HazMit Plan<sup>1</sup> is dedicated to climate change, and defines the relationship between climate change and hazard mitigation, the current indications of climate change, the projected future impacts and responses to climate change, and the potential of climate change to impact hazards. Many of the identified impacts of climate change are felt across the region and the world (such as the potential for drought, flooding, severe weather, and wildfire) and others are less common (such as the unknown impact of climate change on earthquakes, which "could be exacerbated as a result of increased liquefaction, due to increased flooding issues. Such scenarios also have the potential to increase the development of sink holes or mine collapses." (Bridgeview Consulting 2017)).



*Quapaw Powwow Grounds Flooded  
December 2015. Photo courtesy Quapaw  
Nation.*

Including climate risks in their HazMit Plan has brought significant opportunities for the Quapaw Nation. From a monetary point of view, it has opened the door to receiving other grants from FEMA that can be directed towards pre-disaster mitigation, and, importantly, these grants have either limited or no matching funds requirements. This is critical for many tribes because matching funds (which are often 40%-50% of the project cost) can be a prohibitive factor in embarking on these investments. It is also a win-win situation: grants from FEMA allow the Tribe to prepare for, mitigate, and address disasters, elevating their sovereignty and reducing the need for a FEMA response when the inevitable emergencies arise.

Just as importantly, including climate risks in their HazMit Plan has deepened the collaboration across Departments. The Environmental Department and the Department of Public Safety have long had a close working relationship, each valuing the synergies between them, and the Tribe has long been supportive of addressing climate related issues, but this plan has introduced sustainability and climate considerations into the vision of all Tribal functions. This extends to the Quapaw Cattle Company, which is currently working with the Tribe to return mine-altered landscapes back into agricultural fields to better grow corn, beans, and wheat, as well as grazing pasture for cattle. The Environmental Department also works with the Tribal Historic Preservation Office and tribal elders to ensure that cleanups of Superfund sites do not impact cultural aspects, and that subsistence foods like wild onion, wild asparagus, arrowhead root, and duckweed are all considered when planning for climate and hazard mitigation.

Another advantage of including climate in the HazMit Plan is that planning for emergency response and hazard mitigation reaches across boundaries that can otherwise be prohibitive for getting buy-in from important stakeholders. For example, although the tribal elders and leadership are cognizant of climate change, there can be resistance from other sectors on taking climate action. But no one in the area is resistant to incorporating specific preparations and planning to mitigate hazard risks, especially as it relates to flooding. As demonstrated by the steps of the Quapaw Cattle Company, even ranchers in the area are discussing permaculture, silviculture, sustainable agriculture, and using biochar to enhance soil and vegetation. The Quapaw Nation is also investigating the feasibility of constructing an anaerobic digester that would convert food waste from the two Casinos, the elder center, and the processing facility into energy and fertilizer for soils.



*The Downstream Casino Resort resides along the tri-state marker of Oklahoma, Kansas, and Missouri. Photo courtesy of Quapaw Nation.*

### **Next Steps**

There is always more to learn from elders. During the process of developing the plans required to cleanup the Superfund Site and HazMit Plan, Quapaw staff members attended the quarterly meetings held by elders, who appreciated being included in the process. The elders related that it helped put them at ease and have confidence that these plans and actions would benefit the Tribe, and protect them all at the end of the day.

Because FEMA plans must be updated every five years, and the Quapaw Nation's was completed in 2017, the time has come to start laying the groundwork to complete the updates. Part of that process is reaching back out to tribal elders. They have been kept abreast of climate related work, but soon staff will be re-engaging with both elders and youth to share current, area-specific data and plans as they move forward.

The Quapaw Nation has always known that no one can have all the answers, and that it is through collaboration across generations, agencies, and organizations that we learn and grow.

To that end, the Institute for Tribal Environmental Professionals (ITEP) has been a critical partner for the Quapaw Nation, long predating the development of the HazMit Plan.

In February of 2020, ITEP facilitated a workshop hosted by the Quapaw Nation, called the Northeast Tribal Resilience Workshop. The workshop was an opportunity for tribes across the Northeastern Oklahoma region to share resources and tools for building resiliency, of which emergency preparedness is a critical piece. Through the dual lenses of resiliency and climate change, tribes shared case studies, adaptation plans, and emergency preparedness/hazard mitigation efforts. This sharing of knowledge - as opposed to one-way presentations - led to deep and integrated learning.

In what can only be called perfect timing, ITEP will be facilitating cohorts of tribes across the nation to share knowledge in a course called, "Tribal Hazard Mitigation Planning." The Quapaw Nation looks forward to participating in this course as they internally revise their HazMit Plan, rather than outsourcing the revision to a consultant. They know they will have many lessons learned, both to share with others and to learn from for themselves, as they work towards making this fully the Tribe's own plan.

The Tribe's ultimate goals are to not only plan for future risks and mitigate them to the greatest extent possible, but also to become as self-sustainable as they can. Their efforts on self-sustainability have ramped up in the last 10 years, and include raising and processing their own meat to supply food for tribal members, youth in their educational centers, and those who eat at the Casinos; raising bees and harvesting the honey to be used in menu items in the Casinos as well as selling the honey locally, which has the added benefit of aiding those in the area with allergies; processing and roasting their own coffee; brewing their own beer (another use for the local honey!); and simply utilizing as much of their local products, materials, and plans as possible.

Through determination, planning, and foresight, as well as equal measures collaboration and self-sufficiency, the Quapaw Nation is striving for sustainability on multiple fronts, and leading the way for others to do the same.

<sup>1</sup> A copy of the Quapaw HazMit Plan can be obtained by contacting Craig Kreman at [ckreman@quapawnation.com](mailto:ckreman@quapawnation.com).

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## References

Bridgeview Consulting LLC. (2017). Quapaw Nation of Oklahoma 2017 Tribal Hazard Mitigation Plan.

This profile was developed in 2020 by Dara Marks-Marino, Institute for Tribal Environmental Professionals, Northern Arizona University, with financial support from the Bureau of Indian Affairs. The profile is available on the Tribes & Climate Change website:

[www7.nau.edu/itep/main/tcc/Tribes/](http://www7.nau.edu/itep/main/tcc/Tribes/). The tribal climate change profiles featured on the website are intended to be a pathway to increasing knowledge among tribal and non-tribal organizations interested in learning about climate change mitigation and adaptation efforts.

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