

Big Pine Paiute Tribe develops air program



Big Pine Paiute Tribe of the Owens Valley

Big Pine, California

Project Description

The Big Pine Paiute Tribe of the Owens Valley's Reservation sits in proximity to one of the greatest single point sources of PM₁₀ pollution in the United States, Owens Lake. Inhaling dust particles 10 microns and smaller can be harmful, especially for sensitive populations such as the elderly, children, and other individuals with respiratory issues including asthma and emphysema. On days when PM₁₀ levels exceed National Ambient Air Quality Standards, health advisories are issued to surrounding communities by Great Basin Unified Air Pollution Control District.

The existing infrastructure of air monitors did not include land surrounding the Big Pine Reservation, and health advisories were not always issued in time for Big Pine tribal members to take precautions to limit or prevent exposure. Tribal leaders desired to establish a Tribal Air Program to fill a gap in air quality data within the Great Basin Air District monitoring network, help identify and address emissions near tribal lands, and enhance the ability of the tribe to more quickly respond to toxic dust storms of PM₁₀.

Project Details

The tribe had previously developed some capacity for a Tribal Air Program under GAP, setting up a meteorological station and developing a Quality Assurance Project Plan (QAPP) in 2007. Under the direction of the Tribal Council, Big Pine Environmental Director Sally Manning applied for GAP funds

to build additional capacities for a Tribal Air Program, and drafted an EPA-Tribal Environmental Plan (ETEP) that articulated the tribe's desire to better quantify and estimate human health impacts from poor air quality on the reservation. Using the ETEP to outline steps to take to expand the capacity of the air program, the tribe identified capacity indicators that included: completing appropriate training; completing a report analyzing air quality; developing an air monitoring strategy and associated QAPP; establishing a staffing plan for an air quality program coordinator; and receiving funding under the Clean Air Act. The ETEP was then used to develop annual work plans toward those goals.

Although the Environmental Department made excellent progress toward completing GAP work plan commitments, funding limitations and unanticipated changes in personnel created challenges to program development. For example, Manning hired tribal member Jacklyn Velasquez as an Environmental Technician to assist with tasks such as completion of an Air Needs Assessment and associated outreach. After a productive year attending air quality training and assisting with environmental capacity building tasks, Jacklyn moved on to accept a scholarship to attend law school, leaving her position at the tribe. Manning reported that "persons with experience in air quality monitoring are uncommon in the sparsely-populated Owens Valley," and sought

Project Time Period (FY2014– FY2018)

- **Tribal Contact:** Sally Manning, Environmental Director
- **GAP Project Officer:** Damian Willson, EPA Region 9
- **Media:** Air
- **GAP Funded Results:**
ETEPA Development/Implementation
Program Development (Core Competencies)
Training



Dust That Makes Mountains Disappear

Before the tribe was able to monitor for PM₁₀, air quality issues were apparent on days the mountains were obscured by blowing dust (bottom) as seen from the Tribal Administration building. (Top photo shows unobscured view.)

creative ways to identify a replacement. Manning's resourcefulness was rewarded when, a year later, she was able to temporarily re-hire Jacklyn through a paid summer internship facilitated with the Institute of Tribal Environmental Professionals. Jacklyn completed her internship by helping to develop a QAPP and researching options for air monitoring equipment, then moved on to complete her law degree while Manning once again sought a replacement. The tribe has since partnered with AmeriCorps to recruit a Volunteer in Service to America to provide additional staff support for the Environmental Department.

In their endeavor to establish an air program, EPA budget limitations were another hurdle faced by the tribe. The initial CAA 103 application was denied because requests exceeded the funding amount available for tribes in the Region. Despite the rejection, Manning continued to include air related capacity building tasks in the GAP work plan. The tribe subsequently submitted a second CAA 103 application that was selected for funding the following year.

Community Response

An Emissions Inventory previously completed by the tribe in 2010 identified sources of particulate pollution that may be influenced by changes in behavior. These included exhaust from motorists on Highway 395 that bisects the reservation and smoke created by community members incinerating trash and burning wood for heat. The development of an air program under GAP allowed the tribe to encourage healthy air habits through outreach to tribal members by discouraging burning, and encouraging transportation options that reduce vehicle emissions.

Next Steps

Before the tribe can share air quality data, the QAPP developed in 2015 needs further refinement, and logistical challenges in the data collection process need to be resolved. The tribe may need to purchase additional equipment and improve data collection procedures to interface with the Air Quality System (AQS) database.

The tribe will continue to expand the capacity of the Tribal Air Program, using the data collected to inform development of tribal codes and ordinances and support an ongoing dialogue with state and local partners to better understand impacts of off-reservation projects on air quality. For example, the tribe participated in consultation regarding the 2016 Owens Lake PM₁₀ Attainment Plan, and although the Plan includes PM₁₀ goals and mitigation

measures for Owens Lake, the tribe is concerned that groundwater pumping in the Big Pine area may lead to new emission sources of PM₁₀ adversely affecting air quality on the Big Pine Indian Reservation.

The tribe will also continue to work toward meaningful participation in air quality programs administered by other federal, state, local, and tribal entities, including participation in the Great Basin monitoring network to fill an existing air quality data gap. Other tribal efforts include continued development of outreach strategies to the community that promote healthy air quality in Owens Valley.

(Top Photo, Page 1: Dust storm event at Owens Lake. Photo courtesy of Great Basin Unified Air Pollution Control District.)

For additional information, please visit the [Big Pine Paiute Tribe](#).



Map of Tribal Boundaries

Approximately two-thirds of the 600 estimated Big Pine Paiute tribal members live on the 280-acre reservation, surrounded by land owned by the city of Los Angeles and managed by the Los Angeles Department of Water and Power (LADWP). Off-reservation agricultural operations, groundwater pumping, and de-vegetation of LADWP lands are ongoing natural resource issues that contribute to PM₁₀ emissions.

