

Pueblo de San Ildefonso Climate Action Plan

Situated in Northern New Mexico, east of the Los Alamos National Lab (LANL) and north of Santa Fe is the Pueblo de San Ildefonso. The region is home to vast pinyon-juniper forests, ponderosa pine forests, shrublands and grasslands. Although breathtaking, this diverse ecosystem is vulnerable to the impacts of climate change, natural disasters, and species encroachment. New Mexico experiences devastating wildfires annually, often fed by windstorms, hotter, drier conditions and sometimes caused by more intense thunderstorms. While periods of drought can make wildfire conditions more likely and hazardous, less frequent but more intense rainstorms cause flooding and changes to snowmelt and streamflow patterns.



A Kiva at the Pueblo de San Ildefonso. All images and figures courtesy of Raymond Martinez and the San Ildefonso Pueblo.

In the past, magpies – black and white birds in the Corvidae family – lived on the Pueblo year-round. Increasingly, Pueblo de San Ildefonso community members told the Pueblo de San Ildefonso Department of Environmental and Cultural Preservation (DECP) that they were not only seeing magpies for shorter lengths of time each year, but that other plant and animal species were harder to find, if they hadn't already disappeared from the region entirely. Climate change has brought apparent weather changes to the region, but species loss was an obvious indicator that the Pueblo de San Ildefonso Community needed to develop a Climate Action Plan (CAP).

CAP Development

The Pueblo de San Ildefonso CAP was born from community concerns about changes to the environment and local species, so it was only natural to begin the CAP planning process with further community involvement. The Pueblo held targeted community workshops where they hosted discussions about community life, perceptions on climate change, and observed climate impacts and vulnerabilities within the community. After identifying and defining this community vision to address climate impacts on the Pueblo, the DECP worked with an external contractor to begin writing and developing a CAP. They evaluated the likelihood of various climate change impacts affecting the Pueblo and the consequences these impacts might have. After determining which climate impacts the Pueblo de San Ildefonso is most vulnerable to, the DECP and their contractor determined the best strategies for reducing the risk of these climate impacts. The CAP describes steps for implementing the various climate mitigation and adaptation strategies listed and recognizes that this will be an ongoing process following publication.



Community values identified in the CAP. Illustration by Erin Martinez. All images and figures courtesy of Raymond Martinez and the San Ildefonso Pueblo.

Traditional Pottery

Given the prioritization of community input, the CAP is specific to the region and emphasizes cultural resources that will be impacted by climate change, or that can be revitalized and used to combat climate impacts. Community members addressed their concerns around traditional activities, such as traditional pottery making, that are being impacted by climate impacts. Clay deposits are drying up because of warmer temperatures and higher winds, and sometimes no clay can be found in areas that historically had large clay deposits. Plant species used for decorating traditional pottery, such as yucca, also aren't found in all the same places they once were. The DECP is exploring the creation of a tree farm or nursery for narrow leaf yucca, creating availability for local potters. While the Pueblo is trying to protect remaining environments where

materials for traditional pottery can be found, they're having bigger conversations around what does and does not constitute traditional pottery. As climate impacts continue in the region, some are considering that one day clays for traditional pottery may only be found in stores, fundamentally changing the nature of the pots. A consensus hasn't been reached, and community members may always have differing opinions on the matter. Cultural resources and traditions are having to be adapted and reconsidered with the change in climate.

Community Gardens and Traditional Crops

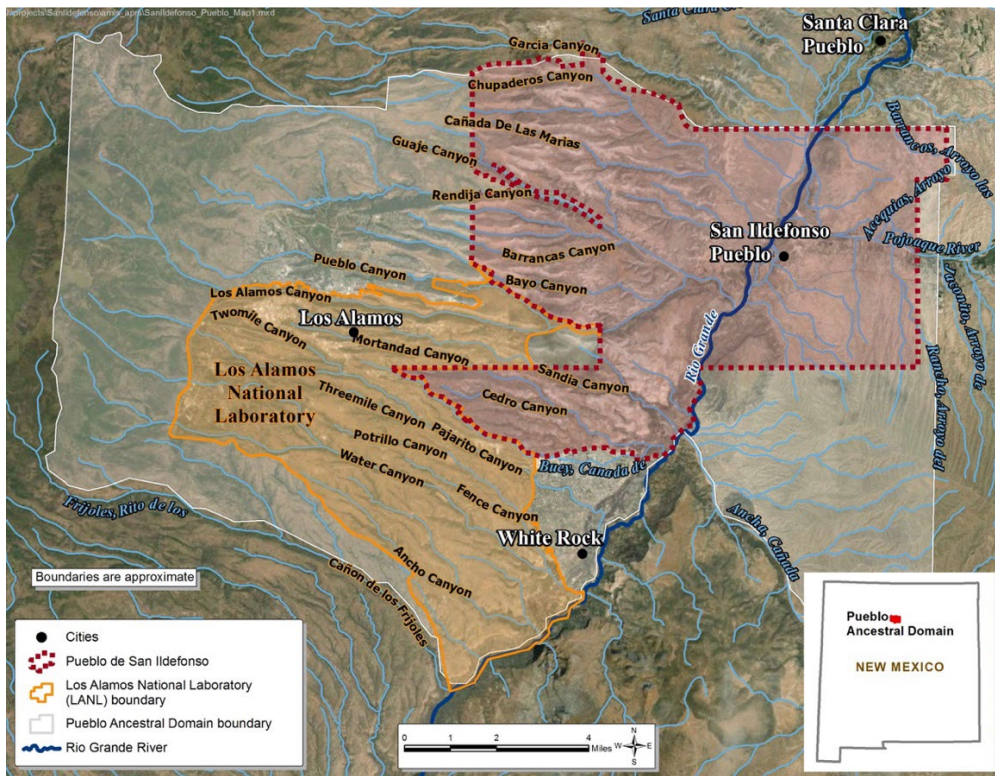
Community gardens for traditional crops have already been established in the Pueblo, but the CAP emphasizes how important it is to make these gardens more accessible to all community members, regardless of age. The Pueblo was heavily reliant on farming and livestock in the past, though many families now tend smaller gardens. To teach youth about the importance of gardening and traditional foods, a local K-6 grade school assists with the Pueblo Community Gardens. This educational program also seeks to encourage students and their families to plant home gardens. Educators at the Community Garden incorporated the Tewa language throughout the garden, teaching youth the names for crops, weather, and other climate phenomena. The schoolchildren love to see their hard work produce crops like pumpkins, squash and corn, so much so that they entered some of their crops in the New Mexico State Fair and cherish the ribbons they won. They save seeds from their best, most climate-resilient crops to plant the next year, in hopes that they can grow traditional crops in a drier, hotter climate.



Cornfields. All images and figures courtesy of Raymond Martinez and the San Ildefonso Pueblo.

Land Boundaries and A Unique Neighbor

In 2000, the Cerro Grande fire, with flames 100 feet high, came through San Ildefonso lands. The fire started when a prescribed burn grew out of control due to wind gusts of up to 50 mph and drought conditions. In attempts to control the fire, emergency responders constructed a firebreak around the LANL, where the Pueblo de San Ildefonso shares a common boundary. Bulldozers ran over cultural sites, and the environment is still recovering from the firestorm. To prevent future damages to cultural and environmental resources, the Pueblo de San Ildefonso Tribal Rangers have started to accompany non-Tribal emergency responders, a strategy outlined in their CAP. Tribal Rangers open gates, show non-Tribal emergency responders access roads and other areas, and continue to follow them so long as they remain on Pueblo lands. The Pueblo de San Ildefonso CAP emphasizes the need to build their capacity with their own emergency response teams to prevent unnecessary trespass.



Map of the Pueblo de San Ildefonso Boundaries. All images and figures courtesy of Raymond Martinez and the San Ildefonso Pueblo.

Sharing land boundaries with LANL puts the San Ildefonso Pueblo in a unique predicament. Not only does this situation create legal challenges regarding land boundaries, it also has created cultural and natural resource losses that would not have been otherwise present. As climate change impacts across northern New Mexico continue in their severity, the San Ildefonso Pueblo is examining the exacerbation of environmental impacts given their proximity to LANL. For example, as storms become more intense, runoff contamination

from LANL is more apparent. San Ildefonso Pueblo has already traced chemical contaminants from the Rio Grande and the Cochiti Pueblo Reservoir back to LANL. Wildfires increase the risk of flooding, therefore also increasing the risk of exposure to these chemical contaminants through runoff.

While the legacy of LANL is controversial, the San Ildefonso Pueblo is working together with the Laboratory to develop solar projects on the Pueblo boundaries and to the north of the Pueblo. These solar projects not only develop clean energy sources across the region and for the Pueblo but have rain capture mechanisms that water vegetation underneath the shade of the solar panels. LANL is exploring this new agricultural method with some groundcover vegetation, but the Pueblo de San Ildefonso wants to experiment with traditional crops under these solar panels. Considering new, climate focused projects such as solar panels, green economic development on the Pueblo and energy efficient infrastructure is going to drive the future versions of the Pueblo de San Ildefonso CAP.

Future Developments of the CAP

The Pueblo de San Ildefonso DECP wants to keep the Pueblo informed and educated about the impacts of climate change on their homelands. Fortunately, the community has been highly receptive to participating in the development and implementation of the CAP, something the DECP has been incredibly grateful for. The existing CAP prioritized listening to the community's concerns and incorporating their knowledge first, and the DECP is going to continue to prioritize that in the future.

“One of the things that we love to do here at our environmental department, is definitely help our leadership and our community.” – Raymond Martinez, Environmental Director, Pueblo de San Ildefonso Department of Environmental and Cultural Preservation

The Pueblo de San Ildefonso DECP is always looking for feedback on their CAP. They emphasize the importance of sharing their CAP and the process of developing it so that others can benefit from the lessons they learned. While they have developed a CAP and are finding ways to implement it in every department and program at the Pueblo, they remain humble and open to hearing what they can do better. The [Pueblo de San Ildefonso Climate Action Plan](#) is available online.

Resources and References

Martinez, R., et al. (2022). *Preserve and Protect Our Community: Climate Action Plan for the Pueblo de San Ildefonso*. Available online from: https://abtmeetings.com/climatechangeplan/downloads/2022.05.04_San.Ildefonso.Climate.Action.Plan.pdf [accessed September 24, 2024].

This profile was developed in 2024 by Taryn Bell, 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. 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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