

GUEST SPOTLIGHT



A HIGH-TECH TOWN STRIVES TO SHINE LESS BRIGHTLY

GALEN GISLER

Jemez Mountains Night Sky Consortium

A RETURN TO PRISTINE BEAUTY

Los Alamos is a small town of some 20,000 residents in the Jemez Mountains of northern New Mexico. The town is well known for being home to the Los Alamos National Laboratory (LANL) and is bordered to the south and west by two National Park System units: Bandelier National Monument and Valles Caldera National Preserve. To the north and east the town is bordered by the Native lands of Santa Clara Pueblo and San Ildefonso Pueblo. While each surrounding entity is unique and distinct, each has at least one thing in common — a strong interest in returning the night-time skies to their pristine beauty.

It's been well over a century since electric lights were invented, and humans have taken advantage of many different kinds of technologies and opportunities that were simply unavailable to our ancestors. However, much of humanity has also lost perspectives and inspiration that past generations took for granted. Wildlife (and plantlife) have been forced to accommodate our lighting habits, often with negative results, and many humans suffer from sleep deprivation and other health issues due to an overuse and misuse of artificial light at night.



Valles Caldera National Preserve, New Mexico. Photo: National Park Service



THE JEMEZ MOUNTAINS NIGHT SKY CONSORTIUM

The scientific activities at LANL attract both amateur and professional astronomers to Los Alamos while the surrounding parks and forests attract numerous wildlife and outdoor recreation enthusiasts. The Pajarito Environmental Education Center (PEEC), established in 2000, now operates the Los Alamos Nature Center which was constructed in 2015. In addition to the wildlife and geology exhibits of the Pajarito Plateau, the Nature Center houses a state-of-the-art digital planetarium and hosts live astronomy talks every week from experts in the field. Currently, due to public health restrictions, these are held online.

An initiative to preserve the beauty of the night skies in this region begun in January 2020 with the foundation of the Jemez Mountains Night Sky Consortium (JMNSC). This consortium was born during a meeting at PEEC and included representatives from Bandelier, Valles Caldera, the Los Luceros Historic Site, the village of Jemez Springs, the Pajarito Astronomers, and PEEC itself.

Initially the scope of the JMNSC was to coordinate public astronomical viewing events held by the various organizations. Some events have drawn several hundred members of the public, while others are more sparsely attended. Even though the region is large and sparsely populated it benefits from abundant and widespread scientific talent.

VALLE
GRANDE
ENTRANCE



VALLES
CALDERA
NATIONAL
PRESERVE

NATIONAL
PARK
SERVICE

GUEST SPOTLIGHT



A 30 YEAR OLD LIGHTING ORDINANCE

JMNSC began comparing the various attributes of locations where public astronomical viewing events were held. These comparisons quickly centered on the quality of the night-time sky and its variability among locations. While the predictable schedule of the Pajarito Astronomers' events was advantageous, the location suffered from its proximity to the lights of Los Alamos and LANL.

Realizing that the Los Alamos County Charter contained a chapter on lighting that was nearly 30 years old, the JMNSC decided to research modern lighting ordinances. Encouraged by initial contacts with members of the Los Alamos County Council, the Consortium drafted a potential new ordinance for consideration by the County staff and government.

Throughout this endeavor the village of Jemez Springs has helped enormously and the JMNSC has also benefited from considerable help from the International Dark Sky Association whose Model Lighting Ordinance, developed in partnership with the Illuminating Engineering Society, has been particularly useful. The Consortium has also had the opportunity to study example lighting codes from Flagstaff and Tucson.

A preliminary draft of the new and updated lighting ordinance has been distributed to business leaders and decision makers within the County government and the Consortium anticipates feedback soon.

Bandelier National Monument and Valles Caldera National Preserve are submitting applications to the International Dark Sky Association for consideration as International Dark Sky Parks — actions that further support the Consortium's efforts. JMNSC has also initiated discussions with authorities at the Los Alamos National Laboratory, which as a Federal property is not subject to County jurisdiction. An initial impression is that the Laboratory is favorably inclined to follow the new guidelines once adopted by the County. As a national laboratory, LANL has its own standards for lighting that are determined by the Federal government. However, the Laboratory recognizes a need to be a good neighbor to the National Parks and tribal lands that surround the County.

The Jemez Mountains Night Sky Consortium is hopeful that within a year's time the County of Los Alamos will adopt a high-quality lighting ordinance and will be able to apply for its own Dark Sky certification.



LEARN MORE

New Mexico True Dark Skies Trail: newmexico.org/darkskies

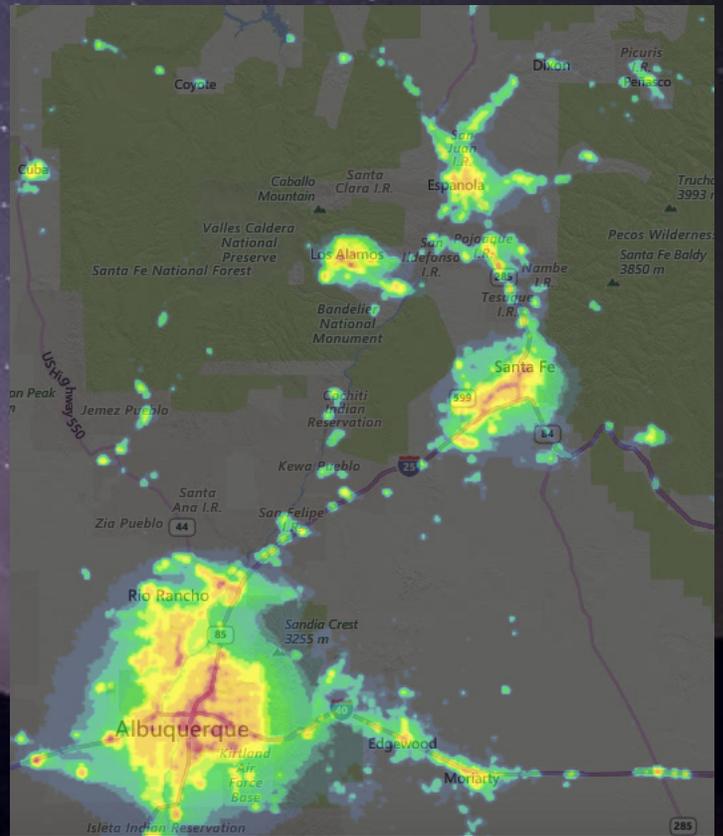
Stargazing in New Mexico: newmexiconomad.com/stargazing-in-new-mexico

Pajarito Astronomers Club: unm.edu/~tbeach/pajarito.html

Pajarito Environmental Education Center (PEEC): peecnature.org

View the Night Sky of Valles Caldera: nps.gov/val/planyourvisit/astronomy.htm

Valles Caldera National Preserve Partners With Local Community To Protect Night Skies: losalamosreporter.com



A light pollution map shows (bottom to top) the cities of Albuquerque, Santa Fe, Los Alamos, and Española. To the west of Los Alamos the skies are very dark and the town has the goal to decrease its contribution to the light domes seen from Valles Caldera and Bandelier.