



Capulin Volcano National Monument

Night Sky

Capulin Volcano National Monument's night sky offers spectacular views of starry nights, providing visitors a tremendous recreational opportunity of star-gazing. The night sky has been identified as one of the monument's fundamental resources and values and is among the top 20 darkest night skies measured in more than 90 national parks. The monument's night sky is situated along the edge of a "dark hole"—an area largely devoid of light pollution—which extends from southwest of La Junta, Colorado to northeast of Las Vegas, New Mexico.

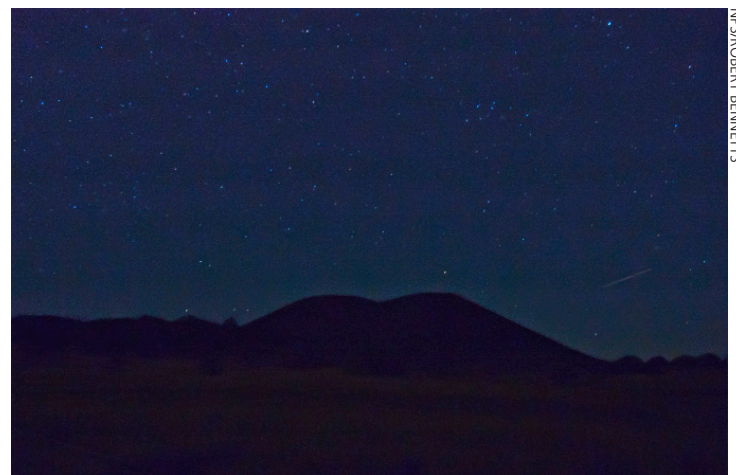
Status and Trends

In assessing the quality of the monument's night sky, three measures were considered, all relating to the darkness of the sky and the lack of artificial light. Two of the measurements, Bortle Dark-Sky and limiting magnitude scales, are commonly used by amateur astronomers, providing a qualitative assessment of night sky darkness. These, along with the measurements of sky brightness, were collected by NPS Night Skies scientists using charged coupled device cameras that capture night sky images from which sky brightness at the darkest and brightest areas and integrated sky brightness (both whole sky and above 20 degrees) are gathered. At present, the monument has one of the darkest night skies throughout the National Park System and falls at the lower end of the Bortle Dark-Sky Class 2. This ranking represent a truly dark sky and is considered an indicator of good condition.

Additionally, the sky brightness values at the monument are consistent with a night sky in good condition, though the data also show the notable impact of light pollution along the horizon.

Discussion

The area surrounding the monument is mostly comprised of natural areas, remaining largely undeveloped. Furthermore, the developments that do exist throughout the surrounding area are relatively small and non-industrialized, resulting in a locally



Dark night sky at Capulin Volcano National Monument.

unpolluted night sky that is currently in good condition. Research has shown that 86% of national park visitors surveyed throughout Utah parks considered night sky quality to be somewhat to very important to their visitor experience, and stargazing events are the most popular ranger-led program throughout the national parks. The future condition of the monument's night sky, primarily influenced by activities outside its boundary even as far away as 250 km, is mainly dependent on regional planning. Unfortunately, night sky degradation, especially in developed countries, is pervasive and has occurred quickly over the past several decades and is expected to continue unless conscious conservation efforts are applied.