

**MICHELLE LUJAN GRISHAM, GOVERNOR**

James C. Kenney, Cabinet Secretary

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The Environment Department's mission is to protect and restore the environment and to foster a healthy and prosperous New Mexico for present and future generations.

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Innovative technology deployed to identify source of leak in Chama drinking water system

Aerial flyovers and satellite data used to quickly search for leaks

CHAMA — Today a contractor conducted aerial flyovers of the Village of Chama to gather data to identify the location of the waterline leak or leaks that caused the water outage in the community. KCSI Aerial Patrol, Inc is flying over approximately 8,000 acres that comprise the Village of Chama and acquiring data in various spectral bands including thermal imagery. These flyovers may assist in detecting unusual changes in topography, temperature, moisture content, or vegetation growth/health as a result of the drinking water leak or leaks.

In addition, KCSI is using recent satellite data to determine if there are any unusual changes to the earth's surface – like sinking land – in the area. The satellite data can highlight even minor changes in the landscape throughout Chama over short periods of time. If one or more leaks in the drinking water distribution system produced a subtle change in the landscape of the Village of Chama, an analysis of satellite data may help to pinpoint the problem.

“This innovative approach brings the latest technology to the skies of Chama, New Mexico in an effort to find the problem with its drinking water distribution system,” said **Environment Cabinet Secretary James Kenney**. “We’re working smarter for the people of Chama so their drinking water is restored as quickly as possible.”

The state of New Mexico has been aiding the Village of Chama since June 10, 2022, when the state was first made aware of the need for drinking water due to an unaddressed leak in the Village’s drinking water distribution system. While drinking water systems are the responsibility of local governments, the state immediately stepped in to lend assistance. The New Mexico Environment Department has experience in conducting aerial surveillance and satellite imagery analysis to assure compliance with various rules and permits.

The New Mexico Environment Department connected the Village of Chama with KCSI and assisted with the scope of work and contracting process. The cost of the aerial surveillance data acquisition and analysis, along with the satellite imagery analysis, is approximately \$130,000. The funding for the contract with KCSI is through existing capital outlay funds allocated to the Village of Chama in 2021 designated specifically for water system improvements and repairs.

KCSI Aerial Patrol, Inc will partner with Ceres Imaging for data processing and analytics. KCSI and Ceres have partnered for the past eight years on agricultural mapping and aerial thermal imaging that is

uniquely suited to this application. KCSI also partners with Boston Geospatial to analyze satellite data collected by the U.S. Geological Survey.

KCSI Aerial Patrol, Inc operates a fleet of 30+ aircraft selected for their utility as aerial data acquisition and surveillance platforms. KCSI specializes in aerial data collection from a suite of sensors as well as the low altitude patrol of oil fields, pipelines and infrastructure.

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