

# Locals Hate SpaceX

## SpaceX launches cause late-night booms that rattle windows, set off car alarms, and may damage property. Some locals are pushing back.

Story by ktangalakislippert@businessinsider.com

- SpaceX runs a launch facility out of Vandenberg Space Force Base in Santa Barbara County, California.
- The company's rocket launches are increasing in frequency — but some locals are pushing back.
- The launches cause loud, rattling booms that one researcher found could cause structural damage.

On December 28, at 5:58 p.m., a loud boom erupted from the dusk sky, stemming from Vandenberg Space Force Base, more than 70 miles away from the sleepy beach town of Carpinteria, California.

The sound, measuring 86 decibels on a home monitor — comparable to a chamber orchestra playing in a small auditorium, according to a scale published by Yale University — was preceded by a low rumbling that rattled windows and started a chorus of neighborhood dogs barking into the evening.

SpaceX rocket launches from the Vandenberg Space Force Base, some taking place between midnight and 5 a.m., have also triggered car alarms, loosened light fixtures, and knocked books and framed photos from the shelves inside homes, residents of Santa Barbara County, California, told Business Insider.

In the quiet city of Lompoc, less than 10 miles from the base, the sonic booms can feel like an earthquake, some residents said.

In 2024, Elon Musk's SpaceX conducted 50 launches from Vandenberg, a spokesperson for the base told BI. In 2025, the company aims to double that number to 100 rockets, according to a statement by The Department of the Air Force.

The base offers an opt-in alert system allowing users to be notified via text of upcoming launches.

Still, some locals are pushing back.

## Loud, disruptive launches

Business Insider spoke with 10 residents of communities near the Vandenberg Space Force Base whose reactions to the launches ranged from fascination to full-blown outrage at the thundering noise and rattling.

"These launches, especially at night, when everyone is asleep, are particularly disruptive," Montecito resident Aimee Klaus told BI. "I'm in an older California bungalow, and things rattle and shake quite substantially."

Each launch sets off a flurry of social media activity in which people express their excitement, anger, and hopelessness about the disruptions and potential environmental impacts.

Locals told BI the base's opt-in alert system is largely ineffective in warning of disruption, because the intensity of the sonic booms changes based on atmospheric conditions, there are sometimes delays not accounted for by the alerts, and some launches take place in the middle of the night — making them disruptive even if you know they're coming.

"I have major panic attacks during the launches," Inga Yater, a resident of Carpinteria, told BI. "And it keeps getting worse; sometimes I feel like I'm having a heart attack."

Yater and other residents also worry the launches might damage the fragile coastal ecosystems nearby.

More than 1,300 people have signed a virtual petition created by Ojai resident Christopher Cantu calling for the suspension of SpaceX launches from Vandenberg pending an environmental impact report.

For his part, Cantu said he's particularly troubled by SpaceX's launches from its Starbase in Texas, where reports indicate the launches have harmed protected habitats, and worries the same damage could occur on the Central Coast he has called home his whole life.

On December 13, the Department of the Air Force announced it would prepare an environmental impact statement for SpaceX launches from Vandenberg Space Force Base to evaluate the potential impact of expanding Falcon 9 and Falcon Heavy launches and landings. The final statement and any potential alternative plans are set to be published by the fall of 2025 at the earliest.

"All launches have the potential to generate sonic booms; however, their audibility to the public is influenced by several factors, including the launch trajectory, the size of the rocket, and atmospheric conditions," a spokesperson for the Vandenberg Space Force Base told BI.

The base has partnered with Kent Gee, a physics professor and acoustics engineer from Brigham Young University, to study the conditions and improve prediction accuracy. However, the spokesperson added that the studies have not yet been completed or their results publicly released.

Representatives for SpaceX and the California Coastal Commission did not respond to requests for comment from Business Insider.

## SpaceX plans for more launches

SpaceX launches take place at four facilities across the country: Cape Canaveral and the Kennedy Space Center in Florida, Vandenberg Space Force Base in

California, and Starbase, the Brownsville, Texas launch site. Residents of each community have expressed similar concerns about the noise and rattling in social media posts and news reports.

In 2024, SpaceX conducted 45 Falcon 9 launches, one Firefly Alpha launch, one Minotaur IV launch, and three Minuteman III test launches from Vandenberg.

In 2025, according to a statement by The Department of the Air Force, the company hopes to expand the types of launches to include its Falcon Heavy rockets, which the company says are larger than the Falcon 9 models and generate more than 5 million pounds of thrust at liftoff — equal to about 18 747 aircraft.

A spokesperson for the base told BI that up to 50 Falcon 9 launches have already been approved for Vandenberg in 2025. However, they said Falcon Heavy launches will not proceed until the forthcoming environmental impact statement has been reviewed and accepted by the Secretary of the Air Force for Installations, Environment, and Energy.

SpaceX also aims to eventually phase out its Falcon-series rockets and replace them with launches of its Starship vessels, The Los Angeles Times reported in March.

At over 30 stories high, Starships are the tallest vehicles ever to fly and create even louder sonic booms during takeoff than the Falcon-series rockets. BI previously reported the Starship launches, which have flown six test flights from the Starbase launch site so far, are akin to a volcanic eruption on the launchpad.

In November, Gee published comprehensive data about the acoustics of Starship launches in Texas.

Gee told BI the sonic booms from Starship launches are so loud — equal to standing 200 feet from a Boeing 747 during takeoff, by his measurements — that there's an "increased risk" of causing structural damage to the properties near the launch pads.

"And that's not to say it's inevitable," Gee said, "but we're getting into that range where the risk isn't negligible."

A spokesperson for the Federal Aviation Administration told BI that the agency requires SpaceX to maintain insurance in the event of claims of structural damage resulting from the flight of its vehicles. Property owners would contact SpaceX to submit claims and evidence in support of any damage claim, the spokesperson said.

Gee is also studying SpaceX launches from Vandenberg, which he said can likely be felt by a broader radius of people than the launches in Florida or Texas, given the California base's proximity to more populated areas.

A spokesperson for Vandenberg said the base is "not currently planning for Starship launches" from the west coast spaceport.

The results of Gee's study at Vandenberg are not yet available. Gee said the researchers studying the impact "don't really have enough data to understand what's going on," given that the booms from each launch change based on the meteorological conditions and weather patterns.

"It took decades of people's experiences with airports and their noise impacts for engineers to learn how to quiet aircraft," Gee said. "We're just starting here and it will be an evolving situation for many years to come."