Sandhill Cranes, the Willcox Playa, and Data Center Noise

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Tens of thousands of sandhill cranes winter in the Sulphur Springs Valley, and the largest share roosts at the Willcox Playa, including at AEPCO's Apache Station, right beside the proposed data center. Science shows chronic noise harms wildlife starting around 40 decibels and disturbs human sleep at similar levels, yet the developer has published no noise numbers.

The cranes' winter home

Each fall, sandhill cranes arrive from mid-September to early October, stay through the winter, and begin leaving around mid-February, with some lingering into March (Arizona Game and Fish Department). They spend nights at roosts and fly out at dawn to feed on waste grain in farm fields, returning between about 11 a.m. and 4 p.m.

The Arizona Game and Fish Department counts the cranes each January:

Site	January 2024	January 2025
Willcox Playa area (incl. Apache Station and Cochise Lake)	24,426	23,522
Whitewater Draw Wildlife Area, near McNeal	13,789	12,209
All southeast Arizona sites	about 42,200 (a record)	38,707

Sources: KTAR, January 2024; Arizona Game and Fish, January 2025.

Apache Station is a crane roost. Game and Fish's 2025 count explicitly includes "birds roosting at AEPCO's Apache Station," and lists the station as a crane roosting site (AZGFD). The Arizona Daily Star names the Apache Generating Station as a prime crane-viewing spot (Arizona Daily Star). The data center parcels sit next to the station.

The playa is internationally important. Audubon's Arizona Important Bird Areas program lists the Willcox Playa and Cochise Lakes as a globally important site for sandhill cranes, and notes ducks, shorebirds, raptors and grassland birds across the seasons. It names development and groundwater pumping as the main threats (Arizona Important Bird Areas).

The cranes are a local economy, too. The annual Wings Over Willcox festival is built around them, drawing birders to the valley every January.

What a data center sounds like

The developer's own notice admits "machines make noise." It describes fan-cooled dry coolers, transformer yards, battery storage, and natural-gas standby generators at every building, with periodic testing, sited 150 to 300 feet from existing homes. It gives no decibel figures.

Reported noise levels at other data centers (Environmental and Energy Study Institute, March 2026):

Source	Reported level
Cooling equipment	up to 70 dBA within 400 feet
Industrial generators	up to 105 dB
Neighbors' readings, Prince William County, Va.	routinely above 60 dB
Neighbor's readings, Dowagiac, Mich. (30 MW site)	about 52 dB in 2022, over 60 dB by 2026 (VICE)

The Michigan facility is 30 megawatts. Phase one here is reported at 1,500 megawatts, 50 times larger.

The hum is the problem. Neighbors describe a constant, low-pitched hum, day and night. Low frequencies travel farther, pass through walls more easily, and are poorly captured by standard decibel meters, which makes ordinary noise rules hard to enforce (EESI).

Quiet places hear more. A rural valley at night is far quieter than a city, so the same machine stands out more against it. Arizona's Chandler shows the pattern: a quiet neighborhood complained of a data center's cooling hum for nearly a decade, and the city later tightened its rules and rejected a new data center in 2025, with noise a major factor.

How far will the sound reach?

No one can say exactly until a noise study is done. Reporting from other data centers says cooling fans and transformers can reach up to 80 decibels at the property line, generators under heavy load can be heard up to a mile away, and the low-pitched hum carries farther still (BGR, August 2026).

A rough estimate: in open country, sound from a single source drops about 6 decibels each time the distance doubles. Starting from a reported 70 decibels at 400 feet for cooling equipment (EESI):

Distance from equipment	Approximate level	For comparison
400 feet	70 dB	A vacuum cleaner
About 1/3 mile	58 dB	Normal conversation
About 1.2 miles	46 dB	Above WHO night guidelines
About 2.4 miles	40 dB	Where wildlife effects begin in research
About 4 miles	35 dB	Still audible on a quiet rural night

This is a ballpark, not a measurement. Sound could reach farther because nine buildings of equipment add up, calm desert nights can carry sound unusually far, and the low hum fades more slowly than higher sounds. It could reach less far because ground, brush and screening absorb some sound. A rural valley at night is often around 30 decibels, so even a faint hum stands out.

The notice places equipment 150 to 300 feet from homes, inside the loudest zone, and the Apache Station crane roost is right beside the site.

Effects on wildlife

Wildlife responds to noise at about 40 decibels. A major review of two decades of research found that terrestrial wildlife responses begin at roughly 40 dBA, and about one in five studies documented effects below 50 dBA (Shannon et al. 2016, Biological Reviews). Documented effects include:

- lower numbers of animals in noisy habitat;
- more time spent watching for danger and less time feeding;
- changes in calls to be heard over the noise;

- effects on survival, breeding and which species remain.

Noise masks danger. Noise reduces a bird's ability to detect approaching threats, and studies cite chronic gas-compressor noise lowering birds' use of habitat and nest success (Petrelli et al. 2017, Frontiers in Ecology and Evolution).

Cranes choose quiet, undisturbed roosts. Studies of sandhill cranes on Nebraska's Platte River found they avoided roost sites near paved roads, gravel roads, single homes and bridges (Norling et al. 1992; Parrish et al. 2001). Cranes flying out at dawn and returning by afternoon also need clear, safe flight paths between roosts and fields.

What is not known. No study we found has measured how cranes respond to a data center. The cranes already roost at Apache Station, a working power plant, so some tolerance of industry is clear. What's new here is scale: nine industrial buildings, a year or more of construction with possible night work, generator testing, added lighting, and possible expansion to 6,000 megawatts, all beside an established roost.

The water question for the roost. The developer plans to supply its water by treating wastewater from Apache Generating Station or using the station's existing process water. Residents should ask whether that water now sustains the ponds where cranes roost, and what happens to the roost if it is diverted.

Effects on people

Health guidelines set night noise low. The World Health Organization's 2018 Environmental Noise Guidelines recommend average night noise below 40 to 45 dB, depending on the source (aircraft under 40, rail under 44, road traffic under 45), based on evidence of harm to health and sleep (WHO 2018 summary). The WHO set no specific number for industrial noise, so a data center falls into a gap.

Neighbors of data centers report real harm. Reported effects include headaches, vertigo, nausea, sleep disturbance, ear pain and high blood pressure. The WHO links high night noise to sleep loss and reduced mental performance (EESI). In Dowagiac, Michigan, two neighbors are suing the operator of a 30-megawatt data center over constant noise (VICE).

It never turns off. Neighbors' complaints center less on loudness than on persistence: a hum that runs 24 hours a day, every day. In a valley where people moved for quiet nights and dark skies, that is a permanent change to daily life.

Many homes are close. Parcel records (Arizona Department of Water Resources parcel layer, from county assessor data) show 22 parcels with street addresses within half a mile of the project parcels, and 68 within about a mile. Eight of the project parcels themselves have street addresses.

What residents should ask the County to require

Cochise County's data center rules (Section 2.51.240.3.d) let the County require a noise impact analysis, but only if it asks for one. Ask the County to request it before the hearing, and to require that it:

1. **Measure the quiet first.** Record existing day and night sound levels at nearby homes and at the crane roosts, so impacts are judged against a rural baseline, not a city one.
2. **Include the hum.** Require the study to measure low-frequency sound, not just standard A-weighted decibels.
3. **Model every phase.** Predict noise for the full build-out up to 6,000 megawatts, including generator testing and construction, not just phase one.
4. **Study the cranes.** Require an independent wildlife assessment, in consultation with Arizona Game and Fish, of effects on the Apache Station and Willcox Playa roosts, flight paths and feeding fields, including lighting and any change to the water that feeds the roost ponds.
5. **Protect the season.** Bar construction and generator testing near the roost from mid-September to mid-March, and at night year-round.
6. **Make it binding and public.** Set enforceable noise limits at the property line, with continuous monitoring, public reporting, and penalties for violations.

Sources

- Arizona Game and Fish Department: Wings Over Willcox release and crane count, January 13, 2025
- KTAR: Over 40,000 sandhill cranes migrate to southeastern Arizona, January 17, 2024
- Arizona Daily Star: Record number of cranes return to Willcox, January 12, 2024
- Arizona Important Bird Areas: Willcox Playa/Cochise Lakes
- Shannon et al. 2016, A synthesis of two decades of research documenting the effects of noise on wildlife, Biological Reviews
- Petrelli et al. 2017, First to Flush, Frontiers in Ecology and Evolution

- Norling, Anderson and Hubert 1992, Roost sites used by sandhill crane staging along the Platte River, Great Basin Naturalist
- Parrish et al. 2001, Distributions of roosting sandhill cranes as identified by aerial thermography, Prairie Naturalist
- Environmental and Energy Study Institute: Communities are raising noise pollution concerns about data centers, March 23, 2026
- VICE: A Michigan couple says a nearby AI data center's constant hum is ruining their home, July 8, 2026
- Summary of WHO Environmental Noise Guidelines (2018)
- Tombstone Resources L.L.C. notice letter to residents, October 17, 2026
- BGR: How far away can you hear AI data centers?, August 23, 2026