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**Greater Roadrunner (*Geococcyx californianus*) hunting Western Diamondback Rattlesnake (*Crotalus atrox*), Arizona**

Photograph By Alan Murphy/ BIA/ Minden Pictures

## **A roadrunner in your neighborhood? It's a growing possibility.**

There's a reason roadrunner bird sightings are becoming more common in communities across the United States.

The greater roadrunner is native to the American Southwest and parts of northern Mexico. But now it's turning up more frequently in new areas. Photograph By Konrad Wothe/Picture Press/Redux  
By Tina Deines June 25, 2025

About a decade ago, Mary Taylor Young and her husband were pulling into the driveway of their cabin, a property nestled at 6,700 feet, in southern Colorado. Suddenly, they saw a face that they weren't expecting: a roadrunner, with its signature spiky head crest and baby blue coloring around the eyes.

"My husband and I were both like, 'Oh, my God, what is a roadrunner doing here?'" Young, a biologist and nature writer, says. "'Dude, you belong in the desert. What are you doing?'"

Young says it wasn't unheard of to see roadrunners in and around the nearby town of Trinidad, Colorado, which sits at about 6,000 feet in the northernmost part of the roadrunner's range in the state. However, she was surprised by this higher altitude sighting, something that's becoming more common.

The greater roadrunner is native to the American Southwest and parts of northern Mexico. This bipedal bird can often be seen running through cities like Albuquerque, Phoenix, and El Paso, searching for small lizards, mice, insects, and other food sources. But now it's turning up more frequently in new areas as it expands its range due to climate change.

### **Roadrunners, coming to a neighborhood near you**

Young has documented the species that visit her property over the last three decades, chronicling them in her book, *Bluebird Seasons: Witnessing Climate Change in My Piece of the Wild*. She says roadrunner sightings are steadily increasing on her property and in and around Trinidad.

Mike Rader, wildlife education supervisor with the Kansas Department of Wildlife and Parks, is seeing similar changes in his state. "There have been increased sightings of greater roadrunners in Kansas, especially in the last couple of decades," he says. "While I don't know if it is a true range expansion, they have been reported further north in the state, even into central Kansas."

Rader says the swell in reporting could be in part due to more widespread internet and greater cell phone and camera access in recent decades. Still, "in my gut, I do feel that there are more here now than when I started birding over 40 years ago," he says.

Nate Swick, an ornithologist and digital communications manager for the American Birding Association, says it's happening in Missouri too. "Back when I was growing up in southwest Missouri in the '90s, roadrunners were really scarce," he says. "Sometimes people would see them down around Branson, but they were few and far between. Now 30 years later, they're

fairly regular nesting birds in that part of the state, though still infrequently seen.” He adds that the birds are turning up further north and east in recent years.

Swick recalls one particular experience seeing a pair in a neighborhood in Springfield, a town in the Ozark Mountains, during a trip home in 2014. “It’s a bird you usually associate with desert landscapes, so it was wild to see them walking around on green lawns,” he says.

According to [ABC Birds](#), the greater roadrunner has already extended its range eastward as far as Arkansas and Louisiana over the last century. The [National Audubon Society](#) predicts that the species will further expand its northern range by 27 percent with 3 degrees of warming, a threshold that some scientists expect us to cross as early as 2070. This would mean more roadrunner sightings in places like Houston, northern Nevada, and up Colorado’s front range nearly as far north as Denver.

Meanwhile, in places like New Mexico, where the roadrunner reigns as the state bird, it seems to be benefitting from even drier conditions, which are expected to increase with climate change. According to Jon Hayes, director of Audubon Southwest, roadrunner populations spiked in the state in the 2010s, which he says is likely correlated to drought conditions experienced across much of the Southwest in that timeframe.

“And that’s the big story here with the roadrunner is that as a changing climate pushes more hot and dry conditions, those critters that are adapted to hot and dry conditions are going to probably do pretty good in the short term there,” he says.

### **Winners and losers**

Seeing new roadrunner neighbors moving into communities might appeal to many people. Rader says most Kansans who come across these quirky birds are “truly excited” to encounter them.

“Personally, I always enjoy seeing them,” he says. “They are still considered a novelty here in Kansas.”

While a drier and hotter landscape puts many wildlife at risk, roadrunners can take advantage of a warming world thanks to number of adaptive traits. For one, they’re able to obtain water from their food sources instead of drinking and can secrete a concentrated salt solution through a gland near their eyes, helping them to conserve water.

Plus, roadrunner’s have one more advantage when it comes to taking on environmental challenges that might stymie other species—their bird brains. “They’re smart and adaptable,” Swift concludes.

However, Hayes warns that the conditions that are helping roadrunners expand their range aren’t worth celebrating. “We don’t necessarily want to see those arid conditions extended to too many of those areas, because the species that are in those areas are going to lose out,” Hayes says.

In fact, the National Audubon Society’s 2019 [Survival by Degrees report](#) found that two-thirds of North American birds are at risk of extinction from global temperature rise.

“Whenever we're thinking about the change in climate, we do have to recognize that there are going to be winners and losers from this,” Hayes says. “Roadrunners are one that likely benefit from more of the country looking like the arid Southwest.”

Young believes one of these “losers” in her area is the broad-tailed hummingbird, a species she is seeing less frequently at her cabin’s feeders. Meanwhile, another hummingbird species—the black-chinned—seems to be becoming more dominant there. The broad-tailed hummingbird, whose fragmented range is limited mostly to mountains in the West and parts of Mexico, is highly vulnerable to climate change, according to [Audubon](#).

And as savvy as they are, even roadrunners will eventually top out when it comes to spreading to new habitats, Hayes predicts. “Sure, they'll expand north, but they're not going to go up into the Rocky Mountains,” he notes. “I mean, they're not going to go up into the pine forest. They'll hit their limits as well.”

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## AI's Challenging Waters

An article from the [Center for Secure Water \(C4SW\)](#)      Written by [Ana Pinheiro Privette](#)

*Fresh water is a precious and limited resource on our planet. Out of all the Earth's water, only 3% is fresh, and of that, a significant 2.5% is locked away in glaciers and polar ice caps making it inaccessible. [This leaves just 0.5% of the planet's water readily available to meet the needs of a growing global population alongside the rising demands from agriculture and industry.](#) When the demand for freshwater surpasses the available supply needed to meet both human and ecological needs, we experience water stress. According to the UN-Water program, in 2021, approximately 10% of the global population - [720 million people - lived in countries with high and critical water stress levels.](#)*

*One additional factor intensifying the water crisis is the rapid growth of Artificial Intelligence (AI). The data centers required to run large AI models consume vast amounts of power. This significant energy consumption generates large amounts of heat, which in turn requires cooling systems to prevent server overheating. Most common cooling methods (e.g., cooling towers) depend on substantial quantities of clean, fresh water.*

### **Data centers are growing like weeds, and they are thirsty**

The rapid growth in the number of data centers—[currently estimated at around 11,000 globally](#)—reflects largely the exponential increase in computational demands for AI. The associated surge in resource consumption raises significant concerns about environmental sustainability, particularly regarding water usage.

Water consumption in data centers varies widely. For example, Google's hyperscale data centers, which support major services such as Gmail and Google Drive, averaged [approximately 550,000 gallons \(2.1 million liters\) of water per day over the past year.](#) In contrast, smaller data centers generally report much lower water usage, averaging about 18,000 gallons (68,100 liters) per day. In the US, where the average per capita water withdrawal is 132 gallons per day, [a large data center consumes water equivalent to that of 4200 persons.](#) This makes data centers one of the [top](#)

[10 of “water-consuming industrial or commercial industries” in the country. The U.S. is home to over 5,300 data centers](#), and by the end of 2021, around [20% of these centers were drawing water from moderately to highly stressed watersheds in the western U.S.](#) This practice contributes to the growing problem of water scarcity in the region.

**AI's water usage can be categorized into three main areas:**

1. Cooling (scope-1): On average, depending on the weather conditions and operational settings, [data centers can evaporate about 0.26 - 2.4 gallons \(1 – 9 liters\) per kWh of server energy for cooling purposes.](#)
2. Water-Intensive Electricity Generation (scope-2): The electricity needed to power data centers often comes from thermoelectric or hydroelectric plants, which require significant amounts of water. [The national weighted average for thermoelectric and hydroelectric water use is 2.0 gal \(7.6 liters\) of evaporated water per kWh of electricity consumed.](#)
3. Water Consumption Associated with AI Supply Chains (scope-3). Producing a single microchip, for instance, [requires 2.1 – 2.6 gallons \(8-10 liters\) of water to cool machinery and make sure wafer sheets are free of contaminants.](#)

**Difficult to track: water usage in data centers**

Over the past decade, ESG (Environmental, Social, and Governance) disclosure requirements have increasingly focused on greenhouse gas emissions, highlighting the urgent need to address data center energy consumption. With increasing pressures for tech companies to reach their [net zero goals](#), a large focus for data center efficiency has been on minimizing energy use and increasing reliance on renewable energy sources. The need to minimize water consumption has received considerably less attention or regulatory incentives.

Tracking water usage for data centers, along with its geographic and temporal distribution, is challenging due to insufficient reporting and transparency. AI model cards—fact sheets that detail how AI models are trained and their intended use—[typically include information about the scope-2 offsite carbon footprint related to energy consumption during model training.](#) However, these cards generally provide little to no information about water usage.

*Source: [istockphoto.com/rusm](https://www.istockphoto.com/rusm)*

**Transparency leads to better resource management**

There is, however, increasing pressure to fully understand the environmental impact of AI. Recently, Massachusetts Senator Edward Markey and other lawmakers introduced the [Artificial Intelligence Environmental Impacts Act of 2024](#). This bill mandates that [the National Institute for Standards and Technology \(NIST\) to develop standards for assessing AI’s environmental impact and to create a voluntary reporting framework for AI developers and operators.](#) Similarly, the European Union's (EU) upcoming [AI Act](#) will require high-risk AI systems—including powerful models like those behind ChatGPT—to report their energy consumption, resource use, and other impacts throughout their lifecycle. This EU legislation is set to take effect next year.

Greater transparency will enhance resource management for tech companies and empower users to make informed decisions about their AI consumption. It can guide the strategic allocation of

AI workloads by leveraging spatial and temporal flexibilities, allowing for more equitable distribution of AI's environmental impact. [For instance, by relocating AI training and deployment to regions with more abundant water resources, it is possible to balance the water footprint across various areas](#), thus preventing a disproportionate burden on regions already facing water scarcity and drought.

### **Innovating our way into cooler spaces**

[In the last 20 years, we have witnessed significant advances in data center efficiency](#). These advancements have reduced energy consumption, improved cooling efficacy, implemented water recycling and conservation practices, and enhanced the overall performance and reliability of data centers. Despite these technological advancements, [AI's global annual water consumption is still projected to reach between 4.2 billion and 6.6 billion cubic meters by 2027 \(4 to 6 times the annual water usage of a country like Denmark\)](#). This is particularly concerning in the context of global freshwater scarcity and the broader challenges posed by climate change.

Geographic location and resource availability are key considerations when designing environmentally sustainable data centers, but the optimization process is further complicated by a changing climate. As climate change intensifies weather extremes, making heat waves and droughts more frequent, data centers are increasingly at risk and are having to consider the business continuity implications of water availability.

As the race for resources increases, many tech companies are strategically positioning their data centers in developing regions, [such as Latin America](#) and arid areas of [sub-Saharan Africa](#) where [real estate and energy are cheaper](#). This practice further strains local water resources, amplifying the water crisis and contributing to geographic inequality.

### **Setting environmental guardrails for AI**

Addressing the water challenges associated with AI will require significant changes, including:

- **Increased Transparency:** Reporting the spatial and temporal water usage of AI workloads, makes it easier to better identify opportunities for efficiency and manage resources more effectively. Effective management relies on accurate measurement.
- **Responsible AI Use:** Balancing carbon and water efficiencies and adopting comprehensive approaches to sustainable AI will help minimize the technology's environmental impact.
- **Technological Innovation:** Improving hardware and software, and adopting cutting-edge cooling technologies, can significantly reduce water consumption.
- **Climate Change Awareness:** Incorporating climate change considerations in data center design and operations may help with operational efficiencies, energy and water consumption, build infrastructure resilience, and meet sustainability commitments.

AI offers substantial potential for tackling critical water-related challenges, such as optimizing agricultural irrigation, improving wastewater treatment, and detecting harmful chemicals in drinking water. However, the full spectrum of risks, societal implications, and potential environmental impacts of AI remains largely unexplored. As this technology advances, it is crucial that we develop environmental safeguards while we address these uncertainties to ensure accountable development and deployment. This is not just the responsibility of tech companies, but that of our collective society as users of the technology.



## NOAA Fisheries weighing ESA protection for Chinook salmon

“The National Marine Fisheries Service, or NOAA Fisheries, will determine whether spring-run Chinook salmon in the Pacific Northwest warrant protection under the Endangered Species Act beginning in the fall. Under a [stipulated](#) settlement agreement filed June 26 in U.S. District Court’s Portland division, the agency has until Nov. 3 to determine whether listing Oregon and California coastal salmon as threatened or endangered is warranted, and Jan. 2 for Washington coastal salmon. “We are unable to comment on matters of litigation,” NOAA Fisheries spokesman James Miller told the Capital Press. ... ” [Read more from the Capital Press.](#)



RGJ

**Topping off ceremony at new Traner Middle School May 2, 2025**

[The interim principal at Vaughn Middle School will be Jeana Curtis.](#) Curtis has been a longtime district administrator including as principal at Incline Elementary School. The principal for the 2026-27 school year is Amanda Lobkowicz, who was serving as the principal in the older building.

Mary Culpeper was named the principal of **Booth Elementary School** in Reno after serving as the school's interim principal.

Mike Gifford will lead the **Debbie Smith Career and Technical Education Academy** when the school opens to students for the first time in August. The school is on the site of the former Hug High. Gifford was previously principal at the Academy of Arts, Careers and Technology and Shaw Middle School.

(Image credit: Getty Images)

## **Abraham Lincoln- On facing your responsibilities**

*“You cannot escape the responsibility of tomorrow by evading it today.” In a letter to then-Secretary of War Edward Stanton, 1864*

Although Lincoln wasn't at the founding, he was the president that kept the Union together when America faced up to the issue of slavery; he deserves an honorable mention.

Our 16th president's words are especially relevant when it comes to dealing with debt, a responsibility you owe a creditor tomorrow for money you borrow today.

We have all made sacrifices today for a better tomorrow. Some people [drive old cars](#), some never went on vacations, and some took [second jobs](#). Why? We did it because we knew saving meant in the future we could buy a house or help children go to college. It's often worth postponing today's wants in order to reap a better reward tomorrow.

**Related content:** [How to Manage Money Like a Millionaire \(Even If You're Not One Yet\)](#)

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## **Sacred fruit: [The Tohono O'odham Nation mark new year with sacred saguaro harvest](#)**

**Video:** [https://apnews.com/video/tohono-oodham-mark-new-year-with-sacred-saguaro-harvest-f0fa4c51b169468ba5ff13018157a08f?user\\_email=e073fe83cf6e594f0fa68c85167471226da0e93d55247b60e6f1153aa19d8ac8](https://apnews.com/video/tohono-oodham-mark-new-year-with-sacred-saguaro-harvest-f0fa4c51b169468ba5ff13018157a08f?user_email=e073fe83cf6e594f0fa68c85167471226da0e93d55247b60e6f1153aa19d8ac8)

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*“If you want democracy, you have to abolosh monarchy and any structure that resembled it .”*  
**Marlene Engelhorn**

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**If you are feling the pinch for groceries, consider Gaza before and after the Israili offensive:**

Eggs	\$3/dozen	Now \$43.00/dozen
Flour (25kg)	\$10	\$558.00

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**Paul Harvey plays the enchanting Native American earth rhythm flute before his shift.**

[Paul Harvey Flute guy](#)

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**[Archaeologists make surprising discovery along the Menominee River on Wisconsin border - WPR](#)** <https://share.google/2h3yNQvPbO3c7SWMd>

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**NYTimes: What Tourists in Martha's Vineyard Showed Me About Being Indigenous**  
<https://www.nytimes.com/2025/07/04/opinion/wampanoag-marthas-vineyard-native.html?smid=nytcore-ios-share&referringSource=articleShare>



## Big, Beautiful Bill Act passed, Native American benefits protected:

"The federal government agreed in treaties to provide for the health and well being of our people. And most people think that's through Indian Health, but Indian Health is only funded at \$8 billion and the need is upwards to \$50 billion to \$60 billion dollars. And our reliance on these programs are the federal government's bandaid to not provide full funding for Indian health."

([KNPR](#))

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***"Let art bring people back to their humanity" Audra McDonald***  
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## Marina Silva Brazil's Environment and Climate Minister

### How have you dramatically reduced deforestation?

We had to rebuild command-and-control organizations and increase public funding. Based on data and evidence, we began from the very beginning to apply policies that we projected would work. And the result is a 46% drop in the last two years compared to the baseline of 2012. Now we have greater complexity. You can initially reduce the highest rates of illegal deforestation. But from now on we need to have policies to stem legal deforestation.

### UN climate talks (COP30)

My hope is that it will be an historical COP. Not because it is done in Brazil, but because it's being held in one of the worst moments that humanity has ever faced. We need to leave Belem with a mandate to create a road map so that we can end deforestation, so that we can stop using fossil fuels in a manner that is fair for everybody.

What can you share about growing up in the Amazon and how it has informed your work?

We can't separate from ourselves that which built us; our dreams, our commitments, our values. The Amazon is a wonderful place. It's an explosion of colors, smells, diversity. It has an acoustic beauty. It has a beauty of image, pictorial beauty, and it is impossible to remove that from within us."

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## Ancient DNA Reveals Who the Maya Really Were — And Why They Collapsed (click on pic)



## History Bits

- 1763 Jul 13** Colonel H. Bouquet wrote of the use of contaminated blankets (presumably smallpox) against tribes around Ft. Pitt: "I will try to inoculate the Indians by means of blankets that may fall in their hands, taking care not to get the disease myself."
- 1784 Jul 12** **El Mocho**, chief of the Tonkawas tribe, assassinated by the Spanish at Presidio La Bahia (Goliad, TX).
- 1850 Jul 9** President John Tyler, opposed to the creation of Territories and States dies in office and is succeeded by Millard Fillmore.
- 1861 Jul 11** Nevada Territory organized by Governor Nye and appointed officials.
- 1861 Jul 12** Two days after the **Creek Tribe** signed a treaty with the Confederate States of America, so did the **Choctaw** and **Chickasaw**.
- 1863 Jul 7** Lt. Colonel Christopher "Kit" Carson departed Santa Fe to begin a vicious campaign against the **Navajo** inhabitants of the southwest, using terror tactics and forced marches that resulted in tribal loss of huge swaths of land.
- 1933 Jul 6** Due to falling levels in the Truckee River, users with water rights after 1900 were cut off for any purposes other than watering stock.
- 1944 Jul 12** Native American **Roy Harmon** killed in Casaglia, Italy.
- 1966 Jul 12** The Nevada State Journal began a six part series about the RSIC.
- 1970 Jul 10** ITCN's **Harold Wyatt** reacting to Nixon's proposal to restore Native American control of their schools, economic development and federal health programs said **Duck Valley, Pyramid Lake and Walker River** prepared to act immediately.
- 2004 Jul 7** **Western Shoshone Claims Distribution Act** passed in Congress.

From the Maven”

**TUESDAY: PUBLIC LISTENING SESSION: Tribal Stewardship Policy and Toolkit at 3pm.** The California Natural Resources Agency is excited to announce the release of the draft Tribal Stewardship Policy and Toolkit for tribal consultation and public comment. Partnering with tribes is a core commitment of the California Natural Resources Agency in conserving 30% of California’s lands and coastal 2030, expanding Nature-Based Solutions as a climate change solution, and creating safe and equitable access to the outdoors. The Agency’s draft Tribal Stewardship Policy and Toolkit provides policy and resources to advance mutually beneficial and durable tribal access, collaboration, and ancestral land return across California. The Natural Resources Agency will be hosting a public listening session. To join, please register here: [us06web.zoom.us/meeting/register/bgxE2PA-Qr286Q1GZw7OjA](https://us06web.zoom.us/meeting/register/bgxE2PA-Qr286Q1GZw7OjA)



- **WaterSmart Innovations, Oct. 7-9, Reno, NV.** [Click here for more information and to register.](#)
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- **Environmental Law Conference at Yosemite, Oct. 16-19, Tenaya Lodge, Yosemite.** [Click here for more information and to register.](#)

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**Berkeley engineers develop customizable, 3D-printed robot for tech newbies**  
<https://engineering.berkeley.edu/news/2025/06/berkeley-engineers-develop-customizable-3d-printed-robot-for-tech-newbies/>

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The Hill

**Trump on Commanders name change: ‘Winning can make everything sound good’**

President Trump said Sunday he would support changing the Washington Commanders’ name back to the Redskins but suggested that, should the capital’s NFL team started winning more, he could get on board with the current name. In a gaggle with reporters, Trump was asked whether he thinks the team should change the name back to...

[https://currently.att.yahoo.com/finance/news/income-taxes-change-trump-signs-213058459.html?.tsrc=daily\\_mail&uh\\_test=1\\_11&.tsrc=daily\\_mail&segment\\_id&ncid=crm\\_-1295960-20250705-444--A&bt\\_user\\_id=YwYv8GcA%2BHEGH2dRdQ2X99x1KmNz8HJn61Q8FXH4%2BpAK7F4D2DRgBpTYjCPgGTed&bt\\_ts=1751704069030](https://currently.att.yahoo.com/finance/news/income-taxes-change-trump-signs-213058459.html?.tsrc=daily_mail&uh_test=1_11&.tsrc=daily_mail&segment_id&ncid=crm_-1295960-20250705-444--A&bt_user_id=YwYv8GcA%2BHEGH2dRdQ2X99x1KmNz8HJn61Q8FXH4%2BpAK7F4D2DRgBpTYjCPgGTed&bt_ts=1751704069030)