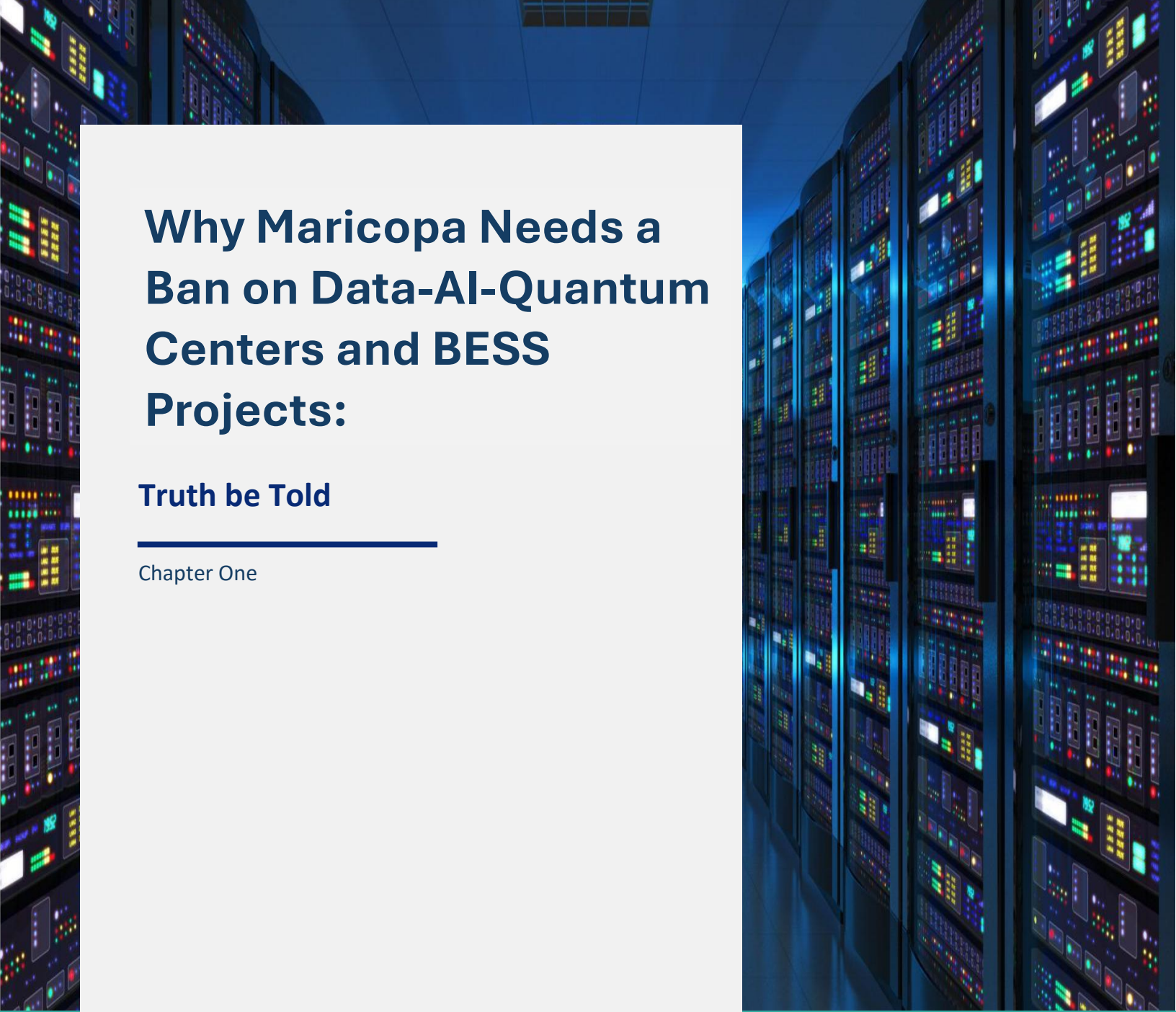




Why Maricopa Needs a Ban on Data-AI-Quantum Centers and BESS Projects:

Truth be Told

Chapter One

by: Brad Follett
Earth Month Network, Inc.

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Executive Summary

WITHOUT a doubt one of the greatest energy, water, environmental, personal privacy and technological concerns facing the City of Maricopa and the state of Arizona today is the crassly accelerated proliferation of the construction and commissioning with so-called Data-AI-Quantum centers and BESS projects. .

This brings about a colossal number of issues to bring to the fore to be considered and evaluated in making an informed decision for implementation of a ban. In doing so facts will be presented as to what is involved with this complicated process so that the current distorted views are brought back in alignment with new optics.

The invaluable asset to this process is the availability to receive knowledge by becoming more aware, better informed and educated on the issues presented herein and building one up through the learning curve so one is not left behind and incapacitated then making uninformed decisions.

There has been a problem with the disinformation floating around about so-called Data-AI-Quantum centers and BEES projects that are in demand of being uncovered. In doing so, the ***Truth be Told*** is for your benefit and that of the City of Maricopa and its residents/citizens.

“Did you know that federal law prohibits building, commissioning and refitting projects in the USA as components come from countries of concern?”

There is a plethora of *valuable* information contained herein that may be new and even uncomfortable to absorb, but it is necessary and imperative in its presentation so that the proper decision-making process is acquired and that public policy can be developed and implemented to *protect* life, natural resources, the environment, property, the economy, and your information/data.

Some may have toured a finished project, one under construction, or attended an informational presentation about them provided by big tech or government. This writing provides a more workable canvase to articulate a correct and vivid picture in an accurate framework.

SUBJECT OF PAPER

There is no surprise regarding the enormous controversy with *so-called Data-Ai-Quantum centers and BESS projects* in the United States now becoming to a greater extent state and municipal specific attacks, to that end encompassing moratoriums and now more importantly the summons for outright bans.

Exclusive to the instant case herein is the matter before the citizens, taxpayers and residents of Maricopa is the desire to have restrictions upon data/AI center projects. The trend nationally is for moratoriums, ¹ now over 71% of people object with such formable public outcry against such centers, ² the advanced trend is for bans on such endeavors for cause. The reasons that more government authorities have not issued bans are many e.g., lack of facts, fear of retaliation, preemption threats by developers, increased undue influence/payoffs, costs and politics. Fourteen states have considered heavy moratoriums or banning such projects ³ with variations. ⁴ and six permanent bans ⁵ as well as the ban by the Seminole Nation in Oklahoma. New York State implemented the nation's first state moratorium on July 14, 2026. ⁶

The scope of this document is to understand and absorb the enormity of the subject matter and answer the question — *why a Maricopa ban may be necessary?* It is all to align with and add to the many current objections known and unknown; now more importantly so to enforce laws that affect both *state and national security interests* not covered by any other objection, moratorium or ban. It is for one to not just hear the facts but to listen intently and be moved to positive action.

DEFINING SO-CALLED DATA/AI CENTERS and DATA

Those entities that promote, fund, appear as the applicants, undisclosed or disclosed parties, offer a very dark grey and distorted view of what a **so-called Data-AI-Quantum centers and BESS projects** is, what it is used for, who owns and will operate it. They even require NDAs of the government entity they are dealing with so that the truth will not be known, and matters can be covered over.

With a colossal number of issues known and unknown by means of the generalized term utilized “**data centers**” one needs to be informed, even educated to overcome the disinformation and propaganda disruptors, in favor of the voluminous important ethical, moral, societal, cultural, environmental and legal substances.

¹ US Data Center Moratorium Tracker, Maintained by Interconnected Capital, LLC

² James Broughel, Forbs Magazine, *Americans Are Losing Patience With Data Centers*, May 20, 2026.

³ National Conference of State Legislatures, *Which States Are Banning Data Centers?*

⁴ Rockefeller Institute of Government *Updates on the Cloud: More Moratoriums on Data Centers*. June 10, 2026

⁵ US Data Center Moratorium Tracker, Maintained by Interconnected Capital, LLC Blue X's

⁶ NYS website, *First Statewide Moratorium on New Hyperscale Data Centers Launched by Govrnor Kathy Hochul*, July 14, 2026

There are many categories of what is more properly termed as “**centers**” surrounded by a given project with specific use, size, design, engineered operations, etc. and consists of:

1. Micro Data Centers

- **Scale & Footprint:** Typically, 1 to 10 racks; occupies under 5,000 sq. ft.
- **Best for:** Single companies, remote branch offices, or localized edge computing.
- **Overview:** Usually housed in a repurposed closet or small office space, these provide basic processing and storage.

2. Edge & Modular Data Centers

- **Scale & Footprint:** A few racks or a fully portable/containerized unit (sometimes called a "containerized data center").
- **Best for:** Low-latency applications, IoT, and AI that require data processing close to the end-user.
- **Overview:** Designed to bring computing and storage to the physical edge of a network instead of relying entirely on centralized servers.

3. Enterprise Data Centers

- **Scale & Footprint:** Requires 5,000 to 100,000 sq. ft; typically draws 1 to 5+ megawatts (MW).
- **Best for:** Large organizations with proprietary or strictly governed data needs.
- **Overview:** Built, owned, and managed by a single company to house their own applications, networking, and storage.

4. Colocation Data Centers

- **Scale & Footprint:** Ranging from a single rented cabinet to entire dedicated cages or floors within a large, shared facility.
- **Best for:** Companies wanting to maintain physical server ownership but without the cost of building and operating a dedicated facility.
- **Overview:** A facility where multiple organizations rent space, power, and cooling for their IT infrastructure.

5. Cloud Data Centers

- **Scale & Footprint:** Massive facilities operated by major cloud providers.
- **Best for:** Scalable IT infrastructure, startups, and enterprises relying on public or hybrid clouds (e.g., Google Cloud Platform, Microsoft Azure).
- **Overview:** Centralized facilities where cloud providers offer computing resources, software, and storage to thousands of customers over the internet.

6. Hyperscale Data Centers

- **Scale & Footprint:** Covers anywhere from 60,000 to millions of square feet.
- **Best for:** Global cloud providers, artificial intelligence (AI) training, and massive data sets.
- **Overview:** The largest type of data center, containing hundreds of thousands of servers optimized for robust, scalable, and energy-efficient operations.

With this brings a short list of what such centers are utilized for:

General Data Storage Centers.

Cloud Storage: Public Cloud, Private Cloud and Hybrid Cloud.

Fusion Centers.

SCIF/skif (Secured Information Data Centers Government use).

Bit Coin Mining.

Data Mining.

AI Centers.

AI Training.

AGI or Artificial General Intelligence.

ANI or Artificial Narrow Intelligence.

ASI or Artificial Super Intelligence.

Colocation Centers for mixed owner/leased occupancy.

Mixed Use Centers.

It is for these reasons and more that they are termed ***centers or center projects*** not just **data/AI centers** due to their vast diversity of intended use, size, design configurations, power and water consumption, construction and operations, etc.

SERVEIALANCE - FUSION CENTERS

The list above remains expansive and now considers an important item some are not aware of, and many are fearful of, the long arm that being “**Fusion Centers.**” After 9-11 the country needed significantly better gathering of information on individuals and nation states of interest. The task was assigned to the Department of Homeland Security (DHS) by President GW Bush.

DHS had revamped and improved their programs to align with other U.S. and foreign agencies (ICPO-INTERPOL) for the Planning, Collection, Processing, Analysis, Dissemination and Evaluation of intelligence. With this came specific hubs in the U.S. to collect, process and be that *analytical* arm of intelligence, done through **fusion centers** starting in October 2004.

The National Network of Fusion Centers (National Network) brings critical context and value to Homeland Security and Law Enforcement that no other federal or local organization can replicate. Fusion Centers accomplish this through sharing information, providing partners with a unique perspective on threats to their state or locality and being the primary contact between frontline personnel, state and local leadership and the rest of the Homeland Security Enterprise.

There are 80 such fusion centers in the U.S. under the DHS Security Enterprise and there is one in all but seven states. Here in Arizona, it is the Arizona Counter Terrorism Information Center (ACTIC), and the city of Mesa PD has a center as the East Valley Fusion Center. These centers are not part of the large common data center scheme but rather on site modular or enterprise internal centers due to security and include some of the various centers SCIF/skif at Langley, VA, Ft. Mead, MD, Interpol, DC and Fort Huachuca AZ.



Inside the Arizona Counter Terrorism Center in Phoenix, AZ

A large bulk of information gathered is using license plate readers from mobile in-car Automated License Plate Readers (ALPR) or LPR systems used on police cruisers. Some of the manufactures/providers are:

- **Motorola Solutions:** One of the most prominent providers, offering in-car mobile units like the L5M Mobile LPR System alongside their Vigilant Solutions software platform.
- **Leonardo (ELSAG):** A major global supplier that manufactures the *ELSAG Mobile Plate Hunter*, a highly utilized in-car camera system used by agencies nationwide.
- **Genetec:** Provides the *AutoVu* mobile ALPR system, which is widely deployed on police, parking enforcement, and security vehicles.
- **Flock Safety:** Known for their widespread roadside fixed cameras, they also produce mobile LPR kits that police can mount directly onto patrol vehicles.
- **Neology:** Produces a variety of ALPR hardware and software solutions used for law enforcement, tolling, and smart city integrations.

These systems allow for information to be transmitted, and results returned in seconds for any action to be taken if needed. The data captured though contractually controlled by an agency, still can be sent to a depository data center available for a fusion center to draw from for analysis.

What has become a worse scenario for the public is the use of cameras that do more than mobile ALPR and LPR systems. One is Flock by Garret Langly and claims on their website:

“Flock is a public safety technology company that builds connected camera, audio, and investigative systems to help communities respond to and investigate safety incidents using objective evidence.

Flock technology combines video, gunshot detection, and investigative software to help law enforcement, schools, and businesses locate vehicles, understand incidents, and collaborate across jurisdictions while maintaining clear privacy safeguards, local control, and responsible data use.”



Flock Fusion Center, Dunwoody, GA tracking people not cars

Other companies that supply same or similar technology and services to governments, traffic, schools, parking lots, malls, retail stores, transit centers are e.g. Coram AI, Motorola Solutions (Vigilant), Axon Enterprise, Verkada, Rekor, (OpenALPR), Genetec AutoVu, SoundThinking, PlateRanger (Rekor), Avigilon (Motorola), PlateSmart.

The technology has expanded to facial recognition, voice, gun shots, video, live feeds and drones, Flock Condor Cameras and Aerodome/Alpha Drones. Such is expounded on Fourth Amendment violations described by the ACLU.⁷ This information collected on vehicles make, year, color, drivers, passengers, pedestrians, school children, recreational areas etc. goes into storage in a center and is available for retrieval to a fusion center for intelligence analysis and dissemination. Flock is not used solely for plate reading as in the photo above. Axon is becoming the replacement and a inferior solution.

The control measures are quite limited to access such data and its use. There are many cases of abuse by LE with eighteen convictions and fifty fired for stalking and other cases of incorrect data resulting in false arrests, and traffic citations. The data at these centers can be easily altered on an individual unlawfully manufacturing them as a target.

One emerging technology is called **SignalTrace** and refers to an advanced electronic signal intelligence system developed by defense contractor Leonardo (ELSAG) designed for law enforcement and security. It pairs with existing automatic license plate readers to collect and track the unique wireless signatures of personal electronic devices in passing vehicles.

⁷ Jay Stanley, ACLU, *Flock's Aggressive Expansions Go Far Beyond Simple Driver Surveillance*, August 18, 2025,

SignalTrace works by bolting wireless sensors onto roadside or pole-mounted camera infrastructure. As vehicles drive by, these sensors passively listen to publicly broadcast radio frequencies, creating a unique "electronic fingerprint" for the devices inside.

Captured devices are smartphones, smartwatches, wireless earbuds, laptops, 5G hotspots, in-car infotainment systems, tire pressure monitors, RFID access cards, and even pet microchips. The data correlation is the system's algorithms link multiple devices that consistently travel together with a specific vehicle's license plate and time-stamped location. It tracks who is in the vehicle, where it has been, where it is going to create detailed digital movement logs of individuals based on their personal belongings and medical devices.

Worse yet is the technology that is already now in place in automobiles for 2026 called **Telematics** which is far removed for the planned Driver Monitoring Systems (DMS) mentioned in recent news. This technology was originally placed in eight manufactures of vehicles but has been found in Jaguars, Rolls and other high-end vehicles.

The special purpose was for the trucking industry to have an expanded form of vehicle telemetry. The use in cars/vehicles currently extends to more than OnStar, e.g. Vin number, maintenance records, facial recognition, cameras to detect certain facial/eye queues, voice, connection to blue tooth devices of driver and passenger, connection to BT medical devices, biometrics, connection to the vehicles systems including the head unit to monitor your listening, verbal conversations, tire pressure and the full autos gambit, real time GPS, the vehicles/occupants locations from and to, etc. ⁸

All this data is fed through the vehicle's antenna by Wi-Fi to the manufacture's data storage who then sells the data to anyone that wants it, e.g. insurance companies, Palantir Technologies, Vanguard Group, Black Rock, State Street and governments. It is a multi-billion dollars free money for the manufacture. If the technology was actually for safety, they would place perimeter cameras on the vehicle. This is a true form of **mass surveillance**, a violation of the First, Fourth, Ninth and Fourteenth Amendments to the Constitution [for] the [u]nited States.

The newest technology is by Israeli surveillance company *Cognyte* Palantir's competitor. Texas state police's purchase of four brand new Chevrolet Tahoes this March was unusual. Not just because of the staggering \$4.5 million price tag, but because the vehicles were kitted out with technology that could monitor the locations of nearby cellphones.

The technology simulates a mobile phone tower, which forces nearby phones to connect to it. That enables cops to keep tabs on any phones in the vicinity — whether they're owned by a suspect in a case or not, being non-discriminant.

⁸ Motor Truth, You Tube Video *Where Every Automaker Hid the 2026 Kill Switch (The Brand-by Brand Map)* June 5, 2026

Cognyte's contract with the state of Texas reveals that the simulator, called *FalcoNet*, can be concealed within the vehicles, hidden in a backpack for on-foot missions or attached to a helicopter. It's the same technology as the infamous Stingray, one of the original cell-site simulators made by defense giant *L3Harris*. ⁹ ¹⁰

The technology discussed herein precisely takes the unauthorized data from each system and is transmitted via 5-G cell tower to a center for assimilation/storage/and retrieval, at times available instantly. There is so much information belonging to individuals and groups that is processed without their knowledge or consent and with the purpose of **mass surveillance** done by plan, preparation, knowledge, intent, motive and done willfully, making individuals as targets, flushing one's rights down the toilet.

THE WANT FOR PROJECT URGENCY

The claim has been introduced that the USA needs to stay ahead of China with centers. This propaganda does not fly as the USA has 4,767 operational and China has 376, and Arizona has 160 commissioned as of this date. Some facilities in China are more vertical but as they expand, they are developing in other locations due to abundant cheap energy, massive state funding, underwater and marine cooling, reduced development costs.

China has over 700 million cameras or one camera for every two people, yet they have 8.4% fewer centers and four times the population. This is a 33% disparity of cameras and centers between the USA and China as the USA grows exponentially faster in building and commissioning centers. Why? **China may have mass surveillance, but they do not sell data like the USA.** Data from the US is available for sale to China.

China is more interested in manufacturing chips ¹¹ as the USA should be concerned with its technology and product from reaching China like **Nvidia** here recently. The interactive global mapping system of centerers is a useful tool for daily updates, for locations and providers and their use. ¹²

Truth of the material is that Microsoft had engineered, developed and implemented underwater data centers first with **Project Natick** phase 1 in 2015, and phase 2 in 2018. The project was shelved in 2024 shifting its focus toward applying learnings about unattended server reliability and subsea vibrations to other deployments. This confirms that Microsoft and others have learned that center **consumes a colossal amount of water and energy**, and the efficiency of underwater centers exceed land-based centers. **Underwater or offshore centers do not have any regulations to contend with on how they operate or the data they retain and sell.**

⁹ Thomas Brewster, Forbes, *Israel's Palantir Rival Is Selling \$1 Million Spy Vans To U.S. Cops*, July 13, 2026.

¹⁰ Gintaras Radauskas, Cyber News, *US police now armed with Israeli spy vans simulating mobile phone Towers*, July 14, 2026

¹¹ Fernanda González, Wired, *China Opens World's First Wind-Powered Underwater Data Center*, June 10, 2026

¹² Data Center Map Aps, *Data Center Map*.

The administration in DC was in want of building sixteen agency specific centers, then reduced to eleven and now down to four projects with additional ones aimed at consideration on federal land for development is on the table as well. The four specific locations are the Idaho National Laboratory, Oak Ridge Reservation, Paducah Gaseous Diffusion Plant and the Savannah River Site. One needs to ask themselves, why are there so many centers in the USA? This does not include the goal in want of an additional 3,000 centers to include Bitcoin and other nonessential advancement.

They also considered and moving forward with centers on open federal land in spite of those locations are too remote for mass construction, and logistics of grid availability, diesel generator/gas turbine fuel sources, and battery storage, labor pool during construction and after commissioning are abysmal. Cost is not a factor to them.

The administration had employed what was earlier termed as **IT Streamlining**. They claimed that past initiatives (like the Federal Data Center Consolidation Initiative) successfully identified and closed well over 1,000 redundant federal facilities to cut taxpayer waste. This was an additional propaganda attempt. Civilian center operators have learned from the federal government that **redundant facilities** are indispensable and commanding to have a process in place to collect, secure and maintain data, and the availability to move/transfer it when a need arises. There is no evidence that facilities were closed but were just restructured as to where data would flow to and from, now it's an unrealistic excuse to build more centers.

An example of this is on March 1, 2026, Iranian Shahed drones directly struck two Amazon Web Services (AWS) data centers in the United Arab Emirates (UAE) and damaged a third facility in Bahrain with nearby strikes. How did Amazon proceed to survive such attacks? It was by preparation with the ability to share/move its data by having redundant facilities to transfer data from one center to the other.

On March 11, 2026, a digital security center in Tehran operated by Iran's state-run Bank Sepah was struck by a missile. This was a center that provided the processing of data that paid the Islamic Revolutionary Guard Corps (IRGC) Army, Navy, Air, Quad, Basij Forces. The other was one belonging to the IRGC Affiliated Data Center. They did not have real-time redundant capabilities.

Front Companies for the IRGC-Cyber Electronic Command (IRGC-CEC) utilizes regional front companies, such as Mehrsam Andisheh Saz Nik (MASN) and Najee Technology Hooshmand Fater LLC, to manage, test, and support its cyber operations. Digital Asset Exchanges: Organizations like Nobitex, Wallex, and Bitpin have been sanctioned by the U.S. Treasury for providing critical exchange networks, digital servers, and asset infrastructure used by the IRGC to evade economic sanctions.

Centers are the new target for modern warfare as destruction is completed by mere drones from long distances without being seen. Some of the other U.S. corporate offshore targets were additional AWS, Microsoft, Oracle, Open AI, Tesla. These companies were prepared to transfer/move data through redundant facilities.

DATA DEFENSE EXAMPLES

This brings us to the question of whether centers and the data they hold are secure? Back in the 70's it was physical and structural security to be concerned with. Picture this true event: After the Iran hostage taking November 4, 1979, Shah Pahlavi's 2nd nephew informed this author that teams were coming to the USA to retrieve the Shah, himself (as a student at the Citadel) heads, and that of the family in Connecticut. Further stated that they intended to disrupt power, oil/gas and water and wastewater facilities. Security protocols were developed as guardrails and put in place November 6, 1979, for W & WW facilities, this is why you see these facilities fenced in today and with other security measures utilizing Micro or Edge centers.

At present we see Iran a country of concern making Cyber-attacks on utilities primary water plants due to their vulnerability and as a practice run to attack water plants that supply water to centers to disrupt service and their operations, predominantly for DC and Virginia centers.

Currently, data is stolen or used internally by employees of companies, medical and banking, etc. and we see aggressive cyber-attacks on facilities primarily on the electrical and pipeline grids. These facility operators are cautious as to what data is placed off site, as it is not as secure.

China has not only tried to get their presence in data halls within a facility but have the technology to obtain data from a server by a parallel energy beam (not a cable) by a technology termed "*port mining*" that would go into an open port of the back of a server module allowing it to be congruent. This is why it is important to know who the principal disclosed parties, owners and occupants are. Centers on a foreign land or in a state have a whole new approach for protection called **Data Sovereignty**.¹³ Arizona does not yet have such laws; however, our indigenous citizens do.

As more centers are commissioned the need to secure data increases. Center design implementation is trending to Fusion Centers contained within a center building. This is so that the data can be processed from within and not have to be reallocated or exported to an external center, this is termed *data containment*. Another reason being that the data can be manipulated and sold on the open market without it going through government channels or resources and avoiding tracing control measures.

¹³ Digital Reality, *What is data sovereignty?* October 17, 2025

Have you considered how the nation-state of Ukraine has protected its data from Russian hacking, bomb and drone attacks? Ukraine has 36 centers and 22 located near Kyiv. It was accomplished and still utilized by redundant facilities with the help of Amazon (AWS). ¹⁴

Additionally, how did Ukraine overcome and advance their data war against Russia with 183 centers and 104 near Moscow? Ukraine "taps into" Russian data centers not by physically plugging in cables, but through advanced offensive cyber operations orchestrated by its intelligence agencies and hacker networks. State operatives and volunteer groups breach firewalls, deploy malware, and infiltrate cloud providers directly to steal data, delete files, and disrupt military logistics. ¹⁵ Their key methods and major operations include:

- **Cloud and Infrastructure Infiltration:** Ukrainian hackers (such as the group *Blackjack*) collaborate closely with the **Security Service of Ukraine (SBU)**. In one operation, they infiltrated **OwenCloud.ru**, a cloud service used by over 10,000 Russian entities, including military and energy firms like: Gazprom, Lukoil, Rosneft, Rostelecom and Megafon.
- **Data Destruction and "Zeroing Out":** The operatives infiltrate administrative networks by gaining root or administrator credentials, allowing them to access hypervisors and virtual machines. After stealing sensitive technical intelligence, they wipe physical and virtual servers, delete backups, and destroy massive volumes of data (e.g., wiping 300+ Terabytes from OwenCloud).
- **Targeting Vulnerable/Outdated Software:** Operations have frequently succeeded by exploiting unpatched, outdated systems or default admin credentials still in use on Russian servers that were neglected due to Western tech sanctions.
- **State and Tax Agency Breaches:** Cyber units within Ukraine's **Defense Intelligence (GUR)** have breached Russia's federal tax service central servers and thousands of regional servers, completely wiping databases and rendering internal communications inoperable.

NATIONAL AND STATE SECURITY CONCERNS

One of the largest concerns is the growth of projects for centers across the country as some 3,000 are reported by AXIOS in waiting.¹⁶ Why so...the reality is for mass surveillance of the populace with expansion since 9-11. ***Did you know that it is not lawful to utilize components from countries of concern, e.g. China (including Hong Kong and Macau), Russia, Iran, North Korea, Venezuela, and Cuba of which to design, engineer, build, commission, operate and maintain projects and centers? Yes, Truth be Told!***

¹⁴ Kaido Einama, Journalist at Postimees, *The Cloud Saved a Nation: How Ukraine Backed Up an Entire Country During the War*, 26th October 2025.

¹⁵ Matthew Gooding, *300TB of data allegedly destroyed*, April 9, 2024

¹⁶ AXIOS-Business, *America's data center growth hot spots, mapped*. December 18, 2025

The formable base laws related to this prohibits such projects as centers in the USA that acquire parts or components from such ***countries of concern*** must comply with the John S. McCain National Defense Authorization Act (NDAA) for 2019 ¹⁷ and 2026 ¹⁸ and the Department of Justice Data Security Rule through Executive Order 14117¹⁹ that restricts transactions involving "bulk sensitive personal data" by countries of concern, and that are implemented by the Bureau of Industry and Security. ²⁰ These are of utmost integral components when considering such a project in Maricopa.

At present the United States does not have companies on shore with capabilities that manufacture the needed components for military, law enforcement or civilian center projects, e.g. hardware computing components and power and infrastructure equipment. Acquisition of unlawful components are currently sourced from countries of concern that supply center projects here in Arizona and across the country. ²¹

We know this to be of serious concern and factual alongside current events with the Russo-Ukraine War. Ukraine has obtained whole drones and partial drones used by Russia against them. It is most unfortunate as the United States supplies Ukraine with armaments and **Russia is using armaments that contain components made in the USA**. Drones used by Russia, such as the Shahed/Geran and Lancet series, are heavily reliant on imported microelectronics. Up to two-thirds of the foreign components inside Russian drones are manufactured by US companies. ²² ²³

- **Microcontrollers and Processors:** Units from Texas Instruments and Microchip Technology act as the computational brain for flight control.
- **Power Management:** Voltage step-down converters, operational amplifiers, and line drivers manufactured by Texas Instruments.
- **Integrated Circuits and Sensors:** Analog-to-digital converters, inertial measurement units (IMUs), and semiconductors from Analog Devices, CTS Corporation, and Monolithic Power Systems.
- **Nvidia:** Their Jetson AI microcomputers have been identified in automated drone targeting systems, pointing to joint Russian-Iranian weapons development.

¹⁷ John S. McCain NDAA for FY 2019, National Defense Authorization Act Section 889.

¹⁸ Cyber and Artificial Intelligence Provisions in the FY2026 National Defense Authorization Act (NDAA) P.L. 119-60.

¹⁹ Executive Order 14114, February 24, 2024, *Preventing Access to Americans' Bulk Sensitive Personal Data and United States Government-Related Data by Countries of Concern*.

²⁰ Bureau of Industry Security, *Industry Guidance to Prevent Diversion of Advanced Computing Integrated Circuits*, May 13, 2025.

²¹ King and Spalding, News and Insights, FY 2026 NDAA: Domestic Sourcing, Artificial Intelligence, Cybersecurity, and Acquisition Reforms, January 9, 2026.

²² Be4Ukraine, *Russian Drones*.

²³ Olena Bilousova, Agiya Zagrebelska, Vladyslav Vlasiuk, and Nataliia Shapoval, *Foreign Components In Russian Military Drones*, (International Working Group on Russian Sanctions & KSE Institute, August 23, 2023)

- **Intel & Advanced Micro Devices (AMD):** Both companies have had their microchips and processors identified in various Russian unmanned aerial vehicles and missile systems.
- **Micron Technology & NXP USA Inc.:** Their microprocessors and memory components have been repeatedly found in recovered drone flight control units.

Manufacturing plants for Microchip are in Chandler while Manufacturing at Lb2 in Tempe closed in 2025. CTS Corporation has a location in Tucson, Monolithic Power Systems has a location in Chandler, Intel has two chip plants in Chandler, while Texas Instruments has design and engineering in Phoenix and Tucson.

This regrettable circumstance translates that while components manufactured in the USA and possible locally in Arizona are used by a country of concern (Russia) against a country (Ukraine) that the USA is providing armaments, humanitarian aid, economic support for during a war. You must ask yourself this essential question: ***if components from the USA are used by Russia against a US ally, what are the chances that components from countries of concern would not continue to flow as components to be used in a center project?*** [emphasis added]

Project sourcing teams are currently struggling to acquire the following hardware and equipment, as some are from countries of concern: [1, 2]

Power & Infrastructure Equipment:

- **Large Power Transformers:** Sourcing these is the most severe roadblock. Lead times have ballooned from a pre-2020 baseline of around 24–30 months to up to 5 years. [1, 2, 3]
- **Electrical Switchgear & Generators:** Essential for managing loads and preventing outages. These systems are facing extended lead times stretching 12 to 18 months. [1, 2]
- **Cooling Systems:** Massive AI server densities require liquid-to-the-chip cooling. Components like cooling distribution units (CDUs) and chillers face a 6-to-9-month backlog. [1, 2]
- **Energy Storage/Capacitors:** High-capacitance MLCCs (Multi-Layer Ceramic Capacitors) and polymer tantalum capacitors suffer from significant delays. [1]
- **Small Stamped Parts:** Even minor electrical hardware items like busbar clips, grounding contacts, and fuses are holding up builds due to widespread supply gaps.
- **Raw Materials:** Global competition for copper—used extensively in data center wiring and power electronics—has driven up prices and restricted availability with 50 tones utilized in a single center.

Hardware & Computing Components:

- **Data Center GPUs:** Compute accelerators remain structurally constrained. Lead times for data-center GPUs generally range from 36 to 52 weeks. [1, 2]
- **High-Bandwidth Memory (HBM):** The HBM supply required for AI processing has been broadly sold out as they consume an estimated 70% of the world’s memory chip

production. This has created a massive structural memory crisis that has delayed supply for consumer and enterprise modules. [1, 2, 3]

- **Power Management ICs:** Voltage regulators and power converters are delayed as data centers compete directly with the automotive and industrial sectors. [1]
- **Optical Transceivers:** The hardware required to link thousands of AI chips together (like 800G and higher optical interconnects) is seeing skyrocketing, unmet demand.]
- **Network Hardware:** High-speed network interface cards (NICs) supporting RDMA, and fiber optic components, remain acutely constrained. [2]

These eleven bulleted components and more at large are very limited if any manufactured in the United States and must be sourced and acquired from other countries including those that are restricted as from *countries of concern*. They are then utilized in the projects design, engineering, construction, building, commissioning, operations and maintenance.

EXECUTIVE NOTICE

Once again, it is unlawful to source and acquire such components as above from a *country of concern* to be implemented into a center project intended for commissioning. This alone is a ***procedural bar*** to any proposed project and prohibits the approval of any project or the implementation of a state law, county or municipal ordinance to allow such execution as a matter of law, *supra* at page 15 and 16. [emphasis added]

ARIZONA DATA

The question that is continually raised — is data safe in Arizona? This answer coexists relative to the type of data, where it is stored and how it is stored and by whom it is stored by. Just with these five variables a risk assessment is diverse even when applying the five W's: who, what, where, when and why.

In general terms data that is stored offsite is more prone to encroachment or a breach. Yet, most breaches are internal from employees and some offshore like those most prevalent today externally from Cambodia, Singapore and others. When considering secure data by the various state agencies and by local governments the server room is a critical component to avoid external server use and storage. These are more secure against external threats. Magnetic reels are still utilized for long-term storage up to thirty-five years.

There is nothing wrong with advancing technology or with legitimate use of data much like in AI for robotic brain surgery, even by LE. The problems arise when individuals go outside the guardrails for personal gain to either corrupt data, change it or utilize it for a nefarious purpose, like for many cases with LE in the USA. This would be the issue for such Fusion Centers currently in operation and those being built inside newer configuration center complexes, and by law enforcement agencies.

ENERGY-WATER-ENVIRONMENT NEXUS

Three of the greatest concerns with project considerations are *Energy, Water and Environment Nexus*. Project realtors, applicants, undisclosed and disclosed principals and some governments if they even took notice of the three, they are regarded and viewed through the lenses of a linear or individual aspect and not circular. The Nexus is avoided promoting their agenda and covering over their intended purposes for a given project.

The water-energy-environment nexus is the deeply interconnected relationship where producing energy requires massive amounts of water (for cooling and extraction), while moving and treating water consumes vast amounts of energy. Environmental impacts link the two, driving the push for circular systems to reduce resource strain. ²⁴ Centers are not sustainable within themselves or externally.

The "circle" or nexus of **energy**, **water**, and the **environment** in a center represents an interconnected ecosystem. Massive computational power demands extraordinary amounts of electricity, which requires vast amounts of water to generate.

In turn, data centers consume millions of gallons of water for cooling, impacting local ecosystems and watersheds, and consideration given to the many variables. [1, 2, 3, 4, 5]

The interaction creates a continuous, circular set of resource demands, compromises, and impacts that dictate modern data center design: [1, 2, 3, 4]

- **Energy » Water (The Indirect Footprint):** Data centers are massive power consumers. The energy mix powering them dictates their indirect water footprint. Thermoelectric power plants (coal, natural gas, nuclear) evaporate large quantities of water to generate steam and cool their systems. Fossil-fuel-heavy grids consume significantly more water than renewable sources like solar. [1, 2, 3, 4, 5]
- **Water » Environment (The Local Impact):** Data centers use direct water resources for cooling systems, often via evaporative cooling towers. While water is highly energy-efficient at absorbing heat, 85% of this water evaporates and is lost from the local watershed. In water-stressed areas—such as the American Southwest—this causes competition with local drinking water supplies and agriculture. [1, 2, 3, 4, 5]
- **Environment » Energy (The Cooling Trade-Off):** To preserve water, data center developers sometimes shift entirely to air cooling or mechanical chilling. However, conditioning large volumes of outside air gobbles shocking levels of electricity, forcing operators to balance carbon emissions with water consumption. [1, 2]

²⁴ Environmental Protection Agency, Region 9, December 13, 2024, *Water-Energy Connection*

Breaking the Cycle:

To reduce the environmental footprint, the industry is heavily focusing on closing the loop on resource management: [1, 2, 3]

- **Closed-Loop Cooling:** Using mechanical systems and non-potable or recycled "grey" water for cooling so that municipal freshwater isn't continuously depleted. [1, 2]
- **Immersion and Direct-to-Chip Liquid Cooling:** Submerging servers or using localized fluid systems that drastically reduce total energy needs and negate the need for water spraying towers. [1, 2]
- **Regional Optimization:** Siting data centers in colder climates (or using oceanic cooling) to utilize the natural environment for free cooling. [1]
- **Zero-Water Evaporation Designs:** Piloting cutting-edge zero-water designs (such as those pioneered in Phoenix, AZ and Mt. Pleasant, WI) aimed at achieving ultra-low Water Usage Effectiveness (WUE). [1]

ENERGY

Projects no matter the size, design, configuration, or use have colossal demands for energy to power the centers. This is categorized by ten primary areas with various subcategories as intended use, e.g. Grid (hydroelectric, coal and nuclear), Diesel Generator, Natural Gas Generator, Geothermal, Hydrogen, Biofuels, Battery Storage, Wind (on and offshore) Solar. ²⁵ Newer technologies are on the horizon, e.g. Offshore Wave Energy, Nuclear Fusion (which is still experimental), Microreactors and Small Modular Reactors (SMRs). All nuclear adaptable energy sources will require clearance by the Nuclear Regulatory Commission (NRC). Japan recently entered into an agreement with Rolls Royce to build Advanced Modular Reactors (AMRs) ²⁶

One of the highest build and operational costs for a data complex is electrical power. A data center or complex can draw 100mw of power up to over 300mw. Centers demand DC power but receive AC off of the grid causing high amounts of dirty energy. It does not appear that any energy best practices are being presented for the use of sustainable energy at most sites. Battery storage creates environmental hazards to destructive electromagnetic field (EMF) energy to the human body and to wildlife, and oil contamination from transformers.

²⁵ U.S. Department of Energy, *Clean Energy Resources to Meet Data Center Electricity Demand*.

²⁶ Rolls- Royce, Press Release, *Rolls-Royce, United Kingdom National Nuclear Laboratory and Japan Atomic Energy Agency to co-operate on advanced nuclear technologies*. June 10, 2026.

At times emergency power is supplied to what is termed a pod which are placed on each side of the building containing huge generators. Some are supplied by diesel engines and others are by natural or hydrogen gas which would require tier IV equipment. The one of choice is Rolls Royce. Their new NG one for 2026 is a 20 Cylinder mtu Series 4000 L64 engine for the 60hz market and able to deliver 2.8mw in 45 seconds. A diesel 4000 series is also used with the ability for adjustable fuels. Model 1600 is still a popular one of choice. Diesel engines sit atop a 3000-to-7000-gal fuel cell and are heavy polluters.



Rolls Royce Rolls-Royce's mtu Series 4000 FNER/FV Hydrogen gas engine.



By: ED3 Sonny Dunn Substation, Maricopa AZ

In the United States and specific to Arizona the electrical grid is crippled being dilapidated and aged. Centers cause localized brown and black outs. Centers can cause a cascade affect reaching other centers and bring large portions of a grid to a screeching halt, affecting mass communities. ²⁷ The potential in Arizona grows exponentially with every new energy consuming project. The good side is that Arizona currently does a better job than other states with grid and rate issues. ²⁸

Project developers are not transparent with divulging information on what their true energy expectations, their sources, and capacity requirements are. This leaves the local residential and commercial/industrial consumers “in the dark” as to what may transpire with utility infrastructure implementation, upgrades with increased costs to them. It is not known of any promises that have been kept by a developer.

As of this writing over 60% of Northern Indiana Public Service Company (NIPSCO) 375,000 customers lost power initially. Gary was the hardest hit city with 22,000 customers left in the heat for two weeks, power was restored August ^{26th}. While this predominantly minority community went without power for essential needs, eight Centers had power to fully operate on reserve.

²⁷ Ambia Staley, “What 'cascading outages' near AI data centers mean for your electricity: A single data center can consume as much electricity as tens of thousands of homes, changing how grids fail and who loses power first.” *Quartz*, May 15, 2026

²⁸ Federal Regulatory Energy Commission, *Working for Reliable & Affordable Power for ALL*.

WATER— OUR PRECIOUS H₂O

Is there any doubt that “**Water Security**” is one of the most critical issues facing the world today as Arizona is without immunity and is in desperation to resolve water allocation and shortages by December of 2026. Part of water security is “**supply and demand**” but without such empty supply and high demand, water conditions diminish affecting human health, and quality of life. This further impacts our Natural, Physical, Cultural, Social and Economic environs compounding the matter.

“**Water Security Now and For Our Future**” it is so essential to humanity globally that it will be next year’s prominent theme as well. Many do not consider the significance of how supply and demand has causes and effects that present cascading results upon each individual **localized region within a county** in the USA or similar in other countries. The problem is so serious we now consider them critical areas of concern expanding as water dissipates, like sand taking over land in the desert until it is gone, resembling Arizona.



Old Maricopa Rail Water Tower by: Copacetic

Would you agree that one of the most compelling, accurate and factual statements today is that “**water is a human right?**” However, there are those as the powers to be within government, corporations, oligarchs, merces contractors that want to control air/rain, surface and ground waters to the point that they are not considered a human right and thwart populaces from accessing it.

To better reason on this when the United Nations Universal Declaration on Human Rights was made in 1948, it included the subject matter of the human right to “**food.**” Under the contextual language embodied in Article 25 with English, Panamanian, French, Chilian, Chinese, Lebanese, Yugoslavian languages at the international cultural drafting-roundtable, **food** was synonymous with **water** then as it is today.

“Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including **food**, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.” ²⁹

²⁹ United Nations Universal Declaration on Human Rights, *Article 25 Sec. 1*, 10 December 1948,

Confirmation of such is by firsthand historical conversational content with a drafter of the declaration is made here to the facts by a former staff OSS intel officer for Gen. MacArthur's logistics teams, and a former Japanese POW twice and later was with the State Department assigned to the Embassy in Panama and assisted in drafting the UN Declaration under Ambassadors Hines and Davis for first lady Elenor Roosevelt, Chairperson of the UN Commission on Human Rights.

The UN over the years has reiterated this point of "***the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life***". ³⁰ This was further expounded upon and enforced by the OHCHR for Availability, Accessibility, Affordability, Quality & Safety, and Acceptability. ³¹ The U.S. Department of State developed nine (9) specific points as to water and human rights. ³² The state of California Department of Water Resources adopted water as a human right in 2021. ³³ Northeastern School of Law published a paper for Lawyers and Community Leaders on the human right to water. ³⁴

Most unfortunate for Arizona as it does not have a specific law that addresses the ***Human Right to Water***. The boiling question is, why not? Arizona does have water policy but does not address human rights, e.g. The Howell Code, Arizona Ground Water Management Code, Assured Water and Adequate Supply Programs.



Visitors take photos at the Wahweap Overlook at Lake Powell north of Page, March 26, 2026

This is now most problematical for approaching December 2026 up to 87% of Arizona is in a 30-year mega drought cycle and escalating. ³⁵ Recovery of drought conditions are not coming soon with Global Warming, Climate Change, weather instability, chemtrails, and lack of time sensitive cloud seeding. The upper Colorado Rive Basin for Colorado, New Mexico, Utah and Wyoming are not willing to negotiate for the lower basin of Arizona, Nevada, California and reservations for a share of the Colorado River water creating a crisis to lake Powel- Glenn Canyon Dam, Lake Meads Grand Canyon Dam power production and agriculture.

³⁰ United Nations, UN Water, *Human Rights to Water and Sanitation*, July 8, 2010

³¹ United Nations Human Rights, Office of the High Commissioner, *OHCHR and the right to water and Sanitation*, 2015.

³² U.S. Department of State, "Views of the United States of America on Human Rights and Access to Water: Submitted to the Office of the United Nations High Commissioner for Human Rights." June 2007

³³ California Department of Water Resources, (web) *Human Right to Water*.

³⁴ Kevin Murray & Sara Kaminers, The Program on Human Rights and the Global Economy, Northeastern School of Law, "The Human Right to Water in the United States: A Primer for Lawyers & Community Leaders.

³⁵ Arizona Department of Water Resources, (website) *Drought Status*

Lake Mead is in a *stage one* shortage of about 1,038.91 feet ³⁶ and drops about a foot every five days, and stage 2 is at 1,035 feet. Without a significant El Nino this summer it will put the lower basin at severe risk. What is making this worse and needs considered is the correlation of loss of pool water that rocks, mud and sand displace.

Current storage capacity at full pool (3702.91 feet above NAVD 88) is 25,160,000 acre-feet. Compared to previously published estimates, this volume represents a 6.79 percent or 1,833,000-acre-foot decrease in storage capacity from 1963 to 2018 and a 4.00 percent or 1,049,000-acre-foot decrease from 1986 to 2018. Areal extent, as of spring 2018, at full pool is 159,200 acres, which represents a 1.33-percent decrease from 1963 to 2018 and a 0.96 percent decrease from 1986 to 2018. ³⁷

With over forty million people in seven states and tribes sharing the Colorado River water, grave controversy over allocations are being disputed. Even with any foothold completed by December, Arizona may lose 27% or more of its allocation. This system has natural feeds to other tributaries as well as pump drawn water.

The Arizona Banking Water Authority came to be in 1996 previously accrued excess Colorado River allocations in underground aquifers over 4.4 million acre-feet of storage credits to ensure long-term supplies during river shortages, protecting municipal subcontracts, neighboring states like Nevada, and tribal rights, and was jeopardized long ago. ³⁸

EFFECTS OF WATER DEPLETION

We have seen the effects of water depletion in Arizona and across the globe for more than thirty years. While **Earth's water** is continually recycled, water shortages occur because the demand for clean, accessible freshwater outpaces how quickly local environments can replenish and purify it. Water does not run out entirely; it is the process which is intended to replenish water that is hindered and its allocation for use is diminished with a fifty-year negative curve.

- **Uneven Distribution & Geography** is a major cause as most earth's water (about 97%) is salt water in the oceans. The small fraction that is freshwater, most is captive to glaciers or deep underground. Usable fresh water isn't distributed evenly across the globe or near major population centers.

³⁵ Arizona Department of Water Resources, (website) *Drought Status*

³⁶ Lakes Online.Com, Lake Mead Water Level

³⁷ Jonathan Casey Root and Daniel K. Jones, U.S. Department of the Interior U.S. Geological Survey, Elevation-Area-Capacity Relationships of Lake Powell in 2018 and Estimated Loss of Storage Capacity Since 1963: Scientific Investigations Report 2022– 5017

³⁸ Sophia Dixon, University of Arizona, Environment, *Where does our water come from?* August 20, 2024.

- **Over-Extraction & Demand** by agriculture accounts for about 70% of global accessible freshwater use. When we pump water out of rivers and underground aquifers faster than rain and snow can refill them, local reserves dry up exponentially.
- **Pollution and Contamination** of freshwater ecosystems are highly stressed by residential, commercial, industrial, agricultural, and human waste. When available water is polluted, it cannot be safely used without expensive and time-consuming purification treatments. This extends to air, water and land pollution and contamination.
- **The Slowness of the Water Cycle** as the global cycle regenerates water over time, the natural cycle operates too slowly to guarantee an available, localized supply. Water may evaporate from Arizona but precipitate over the ocean, leaving local reservoirs depleted.
- **Global Warming and Climate Change** are two major factors impacting our **water security now and for our future**, impeding the natural pace at which the water cycle was designed by our creator and should operate to regenerate our planet as a whole process and in part Arizona. Evaporation of surface waterers are not restored and returned and later precipitate in other places leaving Arizona reservoirs and basins depleted.
- **Accelerated Depletion** of water is not new, having its major push in 1914 onward with WW II, industrialization, lack of nations communicating, cooperating and collaborating and global control measures, atmospheric pollution by CFC banned under the Montreal Protocol of 1980, added depletion of Ozone by space launches, and major stepped-up carbon pollution, continual world conflict and pure greed, etc.
- **Arizona Ground Water Supply** is diminishing faster than it can recover without accelerated snowpack melt, rain, conservation efforts, ground water recharge, better and best management practices, pollution and contamination control, etc.
- **Assured Water Supply** was implemented in 1980 with five initial Active Management Areas (AMAs) with three more subsequent Areas established in 2022. Their function is to aggressively regulate finite groundwater resources and prevent historic overdrafts. These areas require developers of new subdivisions to **legally demonstrate a 100-year Assured Water Supply prior to building**.
- **Adequate Water Supply** operates outside of the AMAs and ensures that the water adequacy or inadequacy is disclosed in the public report provided to potential first purchasers and that any water supply limitations are described in promotional or advertising material.

However, in mandatory adequacy jurisdiction, adequacy of water supplies must be demonstrated prior to plat approval and issuance of a public report. Then the AZDWR issues a certificate stating that the proposed development has a **continuous, sufficient, and legally available water supply of adequate quality, and possesses financial backing to build and maintain the required water infrastructure to last 100 years.**

- **Displacement of Water and Its Distresses** are overwhelming when considering both surface and ground water sources and their location and geological structure. Ground or Aquifer water supplies do not feed surface waters. Arizona ground water is supplied in part by snow cap melts, rain and yes from surface water sources which have all declined.

When the aquifer is displaced, something has to take its space, this is when the unsaturated Clay and Silt Lense begin to develop instability and deforms as void is created when water is pumped out, being distressed. This in turn causes the Unsaturated Zone or Vadose Zone (porous sediment) to become distressed and then the topsoil (sand, gravel, and loose topsoil) does the same. This causes land to subside much like Luke Air Force Base has subsided up to nineteen feet since 1957 (some areas down to Eloy) ³⁹ and such depletion of the aquifer causes deep fishers forty feet deep and fifteen feet wide. ⁴⁰



Joseph Cook/AZGS: crevice 2 miles long and 45 feet deep and 15 feet wide..

On July 9, 2026, the admiration in DC revived the *Cadiz Co. Inc* plan advancing the drainage of ground water out of the Mojave Desert and pump it to California. This is to be done by converting a 30" oil and natural gas line approximately 186 miles to pump water through natural desert habitat, agriculture and Indian lands. This negative action affects Arizona ground water more specifically the Central Arizona Irrigation and Drainage District which provides water to farmlands in Pinal County, where growers are dealing with water cutbacks. ⁴¹

CENTER WATER USE AND CONSUMPTION

There are very few and accurate records or information in relation to specific centers use and consumption of water as this varies with the center's design application (open/closed loop), engineering controls, and methodology of use, waste treatment/reuse; basically it is the cooling technology, the facility size and workload, and the geographic location, and its effectiveness in cooling. ⁴² and its water use while looking at energy. ⁴³

³⁹ University of Arizona, Arizona Geological Survey, *That sinking feeling*, November 12, 2019.

⁴⁰ Scott Seckel, Arizona State University, "That sinking feeling: Experts discuss subsidence, a geological phenomenon that causes the ground to sink and crack" June 30, 2021.

⁴¹ Ian James, *Trump administration clears path for controversial Mojave Desert water pipeline*, July 9, 2026.

⁴² Andrew Higgins, EQUINIX, "What Is Water Usage Effectiveness (WUE) in Data Centers? WUE is the best metric we have for measuring water efficiency in data centers, but understanding it often requires nuance" November 13, 2024.

⁴³ Maya Chari, AMP Research Lab, *Are data centers depleting the Southwest's water and energy resources?* February 27, 2025.

These piped systems may require a “flushing and refill” at least once a year, depending on the maintenance requirement which also demands a pretreatment system of waste. Closed looped systems are the better technology today and use approximately five times less water than evaporative or older and open loop systems. AI centers, where liquid (water or dielectric) cools chips directly, which can be more efficient, but run continuously.

Nvidia’s head of corporate sustainability, Josh Parker, revealed that Nvidia’s new closed-loop liquid-cooling system may have solved one of AI’s biggest problems by reducing data-center water use to near zero and cutting cooling-related energy consumption by up to 40% by use of chilled water, the coolant (a mix of water and propylene glycol) runs “hotter than a hot tub,” operating at inlets of 45°C (113°F) and exiting around 55°C (131°F).⁴⁴ This works in theory but not actual as the servers overheat and will wear out faster requiring replacement. This is a linear approach requiring a circular solution and would be a financial gain for chip sets by Nvidia being replaced more frequently, not a solution for Maricopa or Arizona.

The consumption rate of a medium-sized data center can consume roughly 100 million gallons of water per year. An AI-focused hyperscale data centers require higher, continuous cooling, with some facilities using 385 million gallons annually. Data centers and AI centers use significant amounts of water, with large facilities consuming up to 5 million gallons per day for cooling, equivalent to a town of 10,000 to 50,000 people. It is primarily used to prevent server overheating through evaporation; water usage is expected to rise by 870% in the coming years due to AI growth. As a rule, it would be 1-M gallons a day for a well that pumps 750 gallons a minute. New information reveals that centers have not accurately reflected water use by 10% or more.

The demand for water comes from various sources, lakes, rivers, and ground water. WEED LLC in Tucson knew the struggle to obtain water for a data center here in Arizona. They purchased the 44-acre Sugar Hill Golf Course property off Route 5 in the small town of Portland, N.Y. and will draw directly at the property line from Lake Erie. However, they do not have a reliable power source which would cost millions of dollars to the community and grid system. As previously discussed, power and water go together.

As water becomes dedicated to a specific type of center it creates ambiguous demand but with high numbers that are not properly recorded internally and reported publicly for analysis. It is not only until recently in 2023 that companies and centers are releasing information so that they may boast of their so-called water savings, false sustainability. Water usage has many variables ⁴⁵ as some centers are trackable with real time updates. ⁴⁶

⁴⁴ David Engle, Market Wise, *How Nvidia’s New Cooling Technology Could Reshape the AI Industry as We Know It*, June 25, 2026.

⁴⁵ Miguel Yañez-Barnuevo, *Environmental and Energy Study Institute, Data Centers and Water Consumption*, June 25, 2025.

⁴⁶ AI Water Usage.com, Real Time Environmental Tracking, *The Hidden Cost of Intelligence*.

Of late more and additional centers wanting to build are seeking water sources eager to use and consume it. Sebastian Rucci is a developer and lawyer based in the Southern California suburb of Huntington Beach. His company, *Imperial Valley Computer Manufacturing, LLC* (IVCM), is trying to build a massive artificial intelligence complex in the Imperial Valley and wants 750,000 gallons of water per day for cooling. Imperial Irrigation District is not able to supply grey water for the facility. Rucci is now in want of over 800,000 gallons per day of Colorado River water and filed suit to obtain it. ⁴⁷

UK-based developer *Huntley LLC* (through its subsidiary Rooskey) is proposing a massive \$10 billion, 1-gigawatt data center campus in Page, Arizona on a 500-acer \$7-M land sale of recreational land purchased from the city, located just southeast of the city limits and about two miles from the iconic Horseshoe Bend. It is currently at the feasibility and rezonings phase and opposed by locals and the Navajo Nation. ⁴⁸ This water could potentially come from Lake Powell or the Colorado River.

WATER ASURITY MYTH

As one looks around the world at surface and groundwater supplies, we come to quickly realize that there is no guarantee of a water supply, and understand that there is not any assurance of a water supply in Maricopa or in Arizona, let alone one that is potable.

The *water asurity* concept is a myth in Arizona to make one believe there is plenty of water for all forever, or at least for 100 years. This asurity process started with housing developments and carries over to large commercial/industrial developments.

As related to housing, the Certificate of Assured Water Supply handed to you in a model home office may be the most expensive piece of paper you have ever signed for. In 1993, Arizona created the Central Arizona Groundwater Replenishment District CAGRD which allowed developers to receive a 100-year water guarantee by paying an enrollment fee instead of securing actual physical water. This is what the dangers of negative water policy entails.

Your neighborhood pumps ancient non-renewable groundwater from the aquifer beneath your lot. CAGR D promises to replace it by buying Colorado River water and injecting it into a recharge basin miles away. That replacement water was cheap when there was surplus. There is no surplus left any longer, as we have lost at minimum 27% of Colorado River water and CAP allocations, while our water sources continue to diminish as with the serious drought conditions escaping resolve.

⁴⁷ Kori Suzuki, KPPS Midday Edition, Environment, *Imperial Valley data center developer files lawsuit seeking access to Colorado River water*, June 15, 2026.

⁴⁸ Beth Henshaw, Center Post, *Navajo Nation Leaders Oppose Data Center in Page, Arizona*, May 5, 2026.

CAGRD now buys replacement water at crisis-level prices, and by law, passes that cost directly to enrolled homeowners as an uncapped special assessment on your annual property tax bill. Covered is the Active Management Area boundary loophole, the wildcat five-lot split scheme, and the Rio Verde Foothills disaster where Scottsdale shut off the standpipe overnight and half-million-dollar homes could not flush their toilets.

Commercial and industrial development can take the amount of acreage and divide it by equal amount of home lots and multiply the use of each home 5 lot and apply that for their amount. 5,550 gallons per month per home x 5 homes = 27,500 gallons x 12 months = 330,000 gallons per year for the 5 homes lots. This transferred to the acreage the industry has and comprises their water figure. Once a center turns in this paperwork, then can receive a certificate of Assured Water. There is no legitimacy to this as it is calculated from the CAGRD 100-year water guarantee by paying the enrollment fee instead of securing actual physical water, there is no actual water.

Maricopa currently has approximately 73,500 residents AND 23,000 Homes and anticipates a growth of 20,618 new homes and potentially almost 54,000 new residents in the next five years or so. That would take the city's population to right around 125,000 in five years.

The water basin for Maricopa is in the Pinal Water Management Area as the Maricopa-Stanfield sub-basin aquifer which GWR, the Maricopa-Stanfield Irrigation & Drainage District (MSIDD), and Maricopa Consolidated (CDWID) draw ground water from. The growth in ten years would surpass the claimed water asurity with a center in the wings of Maricopa.

Global Water Resources holds access to approximately 23,000 acre-feet of water annually under a state-approved Designation of Assured Water Supply, with a designated remaining supply of about 21,914 acre-feet against a current annual usage of around 8,000 acre-feet. MSIDD has already cut their usage in half to accommodate drought conditions and to conserve water. MSIDD has approximately 648,000-acre feet of stored/banked water from the Central Arizona Project. [1].

While the city claims and calculates its theoretical ultimate capacity based on its entire 190-square-mile planning area, projecting that it can accommodate roughly 280,000 to 300,000 total new homes at full buildout. [1]

Because the city has only developed about 43 square miles of its footprint so far, city planners rely on a "full buildout" lens rather than a strict calendar to map out decades of growth. [1,] There is not enough water for 20 years let alone 100 years with this residential growth by itself without consideration of any Extremely High Industrial addons like a center.

It was previously discussed how *food and water* were synonymous with its universal linguistic terminology and usage and that *water* is a continual and ongoing *Human Right*, noted at page 22 and 23 *supra*. As we seriously considered the three sections on *Water Our Precious H₂O*, *Effects of Water Depletion*, and *Center Water Use and Consumption*, one's preconceived optics have changed and one's vision and view of the subject have become crystal clear. It is without any doubt that the Arizona water crisis is not conducive to building and operating centers and that such water use now or in the future will diminish water supply and would in effect remove our *human right to water*. The compelling question is, *does anyone really want this?* [emphasis added] ⁴⁹

As we look around us in these critical times hard to deal with, globally the situation of things has not improved as man continues to dominate man to their own injury. Within the stream of time, we are currently in, it was prophesied about for our benefit.

“For nation will rise against nation and kingdom against kingdom, and there will be food shortages and earthquakes in one place after another. All these things are a beginning of pangs of distress.” Matthew 24:7.

This is the stream of time with current events that we are living in. The context of food in this scripture meant grain shortages. Grain was a shortage due to what...lack of water...drought much like Arizona is in currently. Water is indeed a human right; without it we have no food. Examine all the earthquakes and floods in the past two weeks globally.

ENVIRONMENT

With any proposed center project, the third but equal and largest component of alarming considerations is our Environment. It is usually considered as one lump topic but is distinct as to Arizona's vast regional areas and diverse ecosystems to each. When such a project is considered the project principals only contemplate the Digital Environment. One must evaluate the Natural, Physical/Built, Social, Cultural and Economic environs, and the impact such a project has upon them.

Within our natural environment water is considered first as all other aspects of its use and consumption with centers are comprised of or emanate from it. We have considered the different aspects of water sources for use in center projects and how the demand and amount drawn of this precious natural resource is consumed by a center, and what damage the withdraw of water from surface and ground water causes and leaves behind.

⁴⁹ United Nations, “Peace, dignity and equality on a healthy planet, Water”

The second relative aspect to a center's utilization of surface, ground or potable water source is the lack of any treatment of their contaminated water in the operations of a center. Centers have steel pipes that are for transporting chilled and return water to the internal CRAW/CRAU units or direct cooling process. This water contains metals, rust and chemicals and is considered as *industrial wastewater* that is not treated before release, an environmental crime in Arizona.

These chemicals are injected before commissioning with an overflow to sewer, and for operational maintenance and decommissioning the wastewater is released onto the ground, a water source, sewer system or by well injection.

Allegations have been made and are still being investigated about centers causing rusty contaminated water to potable water sources. From a firsthand engineering and operational point this is plausible and possible. Centers have an injection point for chemicals and a pump (operating at 85-psi $\geq$) for this and water from a ground or municipal source. The influent water line and injection port into the centers chilled water system is supposed to have a backflow preventor on the supply line and one for the injection port, and a shut off valve for the injection port. When the pump is turned off and not the valving system, if one is installed the chilled water pumps will force the contaminated water into the systems.

Data center cooling systems utilize a combination of base heat-transfer fluids and specialized water-treatment chemicals to maintain efficiency and prevent equipment degradation. Collant water is tested for contaminants and chemical levels and degradation which may require additional chemicals or a flush of the system. Common chemicals and compounds found in data center cooling systems include but are not limited to:

Coolants & Heat-Transfer Fluids: Primary fluids used in closed loops include:

- **Glycols:** Ethylene glycol or propylene glycol mixed with purified water for direct-to-chip and closed-loop cooling.
- **Fluorochemicals:** Specialized **F-gases** (hydrofluoroolefins, hydrochlorofluoroolefins, and perfluorohexane) are sometimes used in single-phase or two-phase liquid immersion cooling. Some are also in the PFAS class.

Water Treatment Chemicals: Chemicals dosed into evaporative cooling towers to control water quality:

- **Biocides:** Agents to prevent the growth of bacteria, algae, and mold, such as **chlorine dioxide**, **bromine**, **isothiazolinones**, and **glutaraldehyde**.
- **Corrosion Inhibitors:** Chemicals used to protect piping and hardware, including **nitrites**, **molybdates**, **azoles**, **phosphates**, and **polyaluminum chloride**.
- **pH & Scale Conditioners:** Chemicals used to adjust acidity/alkalinity and prevent mineral scaling:
- **Acids & Bases:** **Sulfuric acid** (for lowering pH), **sodium hydroxide** (for alkalinity building and raising pH), and **sodium carbonate**.
- **Polymers:** Used to suspend solids and prevent scaling

One of the largest concerns facing the center water environmental challenge is that of indirect and direct PFASs or termed forever chemicals, PFAS (per- and polyfluoroalkyl substances), a vast group of thousands of synthetic chemicals. They are called "forever chemicals" because their exceptionally strong carbon-fluorine bonds make them highly resistant to heat, water, and grease, meaning they do not naturally break down in the environment or the human body. ⁵⁰

Without any pretreatment or control measures, centers are disposing of their industrial wastewater in a many that pollutes other portions of our environment with potential harm to human health. Arizona needs specific regulations for this industry such as water sourcing, allowable amounts, pre-treatment/treatment, reuse and discharge parameters holding them accountable.

The US Environmental Protection Agency decided on June 16, 2026, that it will not set a nationwide standard for data center release of wastewater and is leaving the decision up to the states. ⁵¹ The state of Ohio is still in review of over 7000 public comments over permit changes for discharge into water sources. ⁵² Pretreatment is both necessary and imperative, let alone common sense. This gives credence for development of Maricopa standards.

When water is pumped from anyone of the 51 aquifers, the quality of water diminishes as collection of contaminants goes through the filtering barriers into the pumping system. As this continues contaminants may not be noticeable except for odors, color and taste which is too late. With any previous waste injection well above the aquifer and that underneath are still cause for alarm to contaminate the ground water, as the aquifer level drops and when the ground's surface drops nineteen feet and then large fisher occur. What will transpire when an earthquake transpires? Injection wells need to be banned to protect our water sources, to keep them potable as a human right.

Projects of this type and scope require special attention and warrants close examination, calling for focused oversight demanding careful consideration essential to Federal and State regulations and covering the minimal available codes. This exemplifies the fact of the requirement to develop codes to meet or exceed the Federal and State laws and guidelines as to specific state, county, municipal codes other than just an ordinance that is void of such, e.g., Programs, Plans, Policies, and Procedures as applied to the enlarged scope toward the Environment and Ecosystems pursuant to:

⁵⁰ Andie May Hadin, Environmental and Energy Study Institute, *Data Centers Are Contributing to PFAS Forever Chemical Pollution*, April 9, 2026.

⁵¹ National Ground Water Association, *EPA announces it won't set nationwide standards for data centers*, June 16, 2026.

⁵² Doug Petcash, 10-WBNS-TV, *Ohio EPA still reviewing proposed permit changing data center water discharge Regulations*, July 14, 2026.

The Clean Air Act (42 U.S.C. 7401 et seq.) ⁵³ The Clean Water Act (33 U.S.C. 1251 et seq.), National Environmental Policy Act (NEPA), Endangered Species Act (16 U.S.C. 1531-1544 et seq.), The Toxic Substance and Control Act (15 U.S.C. 2601 et seq.), Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601 et seq.) and the Noise Control Act of 1972, Public Law 92-574 (H.R.11021 92nd Congress) October 22, 1972: Quiet Communities Act of 1978, Public Law 95-609 (S. 3083 95th Congress) November 8, 1978, ⁵⁴ and the Noise Abatement Control Act. ⁵⁵ and others.

LAND USE — OPEN and CLOSED

The purchase and accrual of *open land* for centers in the United States is executed by large consortiums and individuals specializing in this, e.g. Open AI, Microsoft, Meta, Google, AWS, Nvida, with others backing through acquisitions, joint ventures, and forward-funding. Some of the oligarchs consist of Elon Musk (SpaceX and xIA), Jeff Bezos (Amazon, Blue Origin), Robin Khuda (AirTrunk) Mark Zuckerberg, Bill Gates, Kevin O'Leary, Dennis Troesh, Sam Altman, Jensen Huang (Nvidia), Peter Thiel (Palantir), Garrett Langley, Alexander Karp, Matt Feury, Paige Todd, Stephen Cohen, BlackRock, Vanguard Capital, and State Street Global Advisors.

Second are some of the foreign oligarchs presented and may now have an interest in land and building projects in the USA or targeting Arizona directly or under shell operations. as Mukesh Ambani (India), Reuben Brothers (UK), John Fredriksen, (Cyprus), Patrick Soon-Shiong (South Africa), Oleg Deripaska (Russia), Naguib Sawiris (Egypt), Oei Hong Leong (Singapore).

Third group of companies that elect to build their own or for other smaller projects and lease space out for a return on colocation centers like WEED, LLC from Tucson, Span, Crusoe, CoreWeave, and Deep Green.

Fourth group are companies and individuals that grab farmland and water rights, e.g. Nestle, Apple, Amazon, Microsoft, Goggle, Oracle, and Bill Gates (Cottonwood Ag Management, Angelina Ag Company, Mt. Edna Farms, 100C LLC) along with other private equity firms WisdomTree. Large open land development and real-estate Kuldip Verma, Verma Land LLC, is on the move towards La Osa Data Center 3,300 acer project with fifty-nine buildings just southeast of Eloy along the Greene Canal. Verma intends on taking the solar project nearby on state land for part of their energy. Such land-grabs destroy the integrity of the environment and our delicate ecosystems damaging humans and wildlife. Pinal County denied their proposal on August 26, 2026, with a vote 4 to 1.

⁵³ Environmental Protection Agency Clean Air Act Resources for Data Centers, May 12, 2026.

⁵⁴ Environmental Protection Agency, Noise Control Act of 1972, *Public Law 92-574* (H.R. 11021 92nd Congress) October 22, 1972: Quiet Communities Act of 1978, *Public Law 95-609* (S. 3083 95th Congress) November 8, 1978

⁵⁵ Noise Abatement and Control, *Title 24 CFR Subpart B—Noise Abatement and Control § 51.100 Purpose and authority.*

The *closed land* categories are those that were previously built structures and being converted into centers. The example here is the old Dish Network call center at 4801-4811 E. Thistle Landing Drive (between Ray Road and Chandler Boulevard) in Ahwatukee, Arizona. It is a 38.3-acre site being developed by *Thistle Income Partners LLC of Menlo Park, California and Menlo Equities* (through its data center arm, *Menlo Digital*).⁵⁶

The project is to consist of five two-story buildings totaling 1,022,400 square feet, featuring 20 mixed data/AI halls (not retail or in commerce) and will consume at least 257MW utility feed from Salt River Project (SRP), supporting 180MW IT power.



Follett; *Menlo Digital MD-PHX I Ahwatukee August 16, 2026.*

This project known as the *MD-PHX I* (Phoenix) principle has not disclosed project water consumption and environmental concerns, has increased costs for residents, and has exercised a lack of transparency by not holding any meetings with the public/residents, etc. The project is in proximity to within 200≥ feet of apartments and housing, and proximity to other residential, commercial, religious and educational facilities.

Primary issue through this project is with its inception alongside the City of Phoenix until present. Phoenix failed in its official capacity to protect its citizens in correct zoning ordinances and planning development codes for correct approval of such a project or to prevent the project from being developed in a very low-level code as Commerce Park and General Commerce Park⁵⁷ and its intent does not remotely meet that low standard. In fact, the city code for commercial use is not met or even the threshold for industrial use.⁵⁸

These centers are not retail candy stores, they are not in commerce or daytime manufacturing, they are in part buildings that operate 24/7 that create nuisances, use mass quantities of water and electricity, cause human harm and are in a class all their own as Extremely High Industrial (EHI), diminishing the quality of life.

The project will not be able to curtail energy and water consumption draining the communities' usable supplies, will pollute the air with contaminants, and emit relentless noise by volume and frequency pollutants, not being able to meet a 55 db requirement. Residents will soon make complaints to the city^{59 60 61} and ultimately require lawsuits which could be avoided if the city were to have acted first instance.

⁵⁶ Menlo Digital, *portfolio MD-PHX I*

⁵⁷ Phoenix Municipal Code, Section 626. Commerce Park District.

⁵⁸ Phoenix Municipal Code, Section 628. A-2 Industrial District.

⁵⁹ City of Phoenix, Division 2. Nuisances and Noise, Sec. 23-11. Nuisances.

⁶⁰ Arizona Revised Statute 13-2908. Criminal nuisance; classification.

⁶¹ Arizona Revised Statute 13-2917. Public nuisance; abatement; classification.

AIR POLLUTION

The alarms have been sounded over the *increase of health concerns* from the pollutants that centers release into the atmosphere with vigilant scrutiny. Centers create environmental health impacts, driven by their massive energy consumption and reliance on backup generators. The primary health concerns stem from both fossil-fuel-generated electricity and on-site diesel, or gas turbine backup systems. This exposure can lead to increased rates of asthma, cardiovascular disease, elevating cancer risks and premature death.



Thermal Image of Elon Musk's xAI Center in Memphis Tenn. emitting thermal pollutants [fn 64](#)

This is due to the release of carbon dioxide (CO₂), nitrogen oxides (NO_x), sulfur dioxide (SO₂), methane (CH₄), volatile organic compounds, and fine particulate matter of over 2.5 microns degrade air quality and could contribute to 1,300 deaths annually by 2030. [62](#) The concern over evaporative PFAS from generators (and cooling water) is an ozone depleter as a contributor towards Global Warming. [63](#)

The added problem to this is the amount of thermal pollution that both chillers and generators can increase the ambient temperature by 16°F / -8.8°C. When this transpires the particle pollutants carry up to ten miles from the center and then may fall on top of homes or breathe in. [64](#)

NOISE POLLUTION

Data center builds are constructed in similar ways to cut costs and have consistent building requirements that are repeatable for Mission Critical projects. Most but not all consist of 2 floors and usually two large sections on each floor that are leased to other clients. A building is about 55 feet tall with a deck to hold the large chillers weighing about 53,000 lbs each. The deck including the top of chillers, and the building would bring the height to approximately 80 feet.

[62](#) Isevier B.V. on behalf of Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment (MEE) & Nanjing University. "Global data center expansion and human health: A call for empirical research," 2025. ©

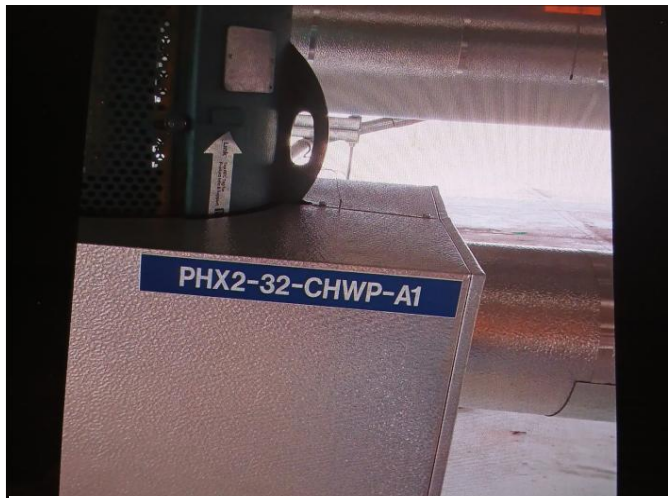
[63](#) The Guardian, "Advocates raise alarm over Pfas pollution from datacenters amid AI boom: Tech companies' use of Pfas gas at facilities may mean datacenters' climate impact is worse than previously thought," October 4, 2025.

[64](#) Nicholas Cunningham, Gas Outlook, xAI data centre emits plumes of pollution, new video shows, 12/06/2025

Depending on the manufacture and type of chiller some water and others are with centrifugal or screw pump being most common with 20 to 800 tons of cooling energy. These systems are very loud and have been recorded to be at 119 db much like the generators. If the pumps are wrapped it still produces 95 db or more into the environment.

Under the large chillers it can consist of the pumps and piping that move water from the building to the chillers. It has a vertical central pump that runs at 85 psi and is very loud at over $100 \geq db$.

Chiller noise can be up to 119 db which can travel up to four miles. Just as dangerous to the noise level to humans and wildlife are the frequency/hertz ranges. Each unit manufacture and brand have their own ranges.



Follett: 500 hp Horizontal chiller pump with 14 psi suction energy: See [Video](#) Hearing protection required

Horizontal chilled water pumps are under the platform for the chillers and pump warm water from the data floor back to the chillers for recirculation. They operate at $100 \geq db$ or louder with a steady hz range.

The large generators are test run weekly and are extremely loud. Depending on the generator its manufacture model they can produce 119 db and their own frequency/hertz issues that are damaging to humans and wildlife.

Health effects of both chillers and generators can transmit variable noise db levels and variable hz up to four miles away as infrasonic and low-frequency noise, and close EMF energy harm to humans and wildlife mostly harming developing children, developing fetuses, pregnant women, the elderly, and individuals with chronic respiratory or cardiovascular disease, sleep disorders, stomach ulcers, headaches, etc. Various reports are out stating that due to noise and vibrations cattle within a quarter of a mile are not eating and have still born calves.



Rolls Royce Deisel generator on top of green fuel tank at CyrusOne in Chandler, AZ



Follett: Assembling the head piece to a CRAH unit inside a data hall at CyrusOne Chandler, Arizona.

Indoors within each of the data halls consists of several cooling units called Computer Room Air Handler (CRAH) units that receive the chilled water from under the floor and circulate the air within the stacked unit to cool ambient air and circulate it in the hall to cool the equipment.

A Computer Room Air Conditioner (CRAC) unit is an air conditioner that directly cools the air much like a regular AC to the rack units. Both run like big fans at lower *db* and do not affect external noise.

Centers emit several types of frequencies, primarily **acoustic noise**, **electrical supraharmonics**, and **electromagnetic fields (EMF)**. [1, 2, 3, 4]

1. Acoustic Noise Frequencies (Sound)

Centers are well known for their continuous, 24/7 noise output, primarily driven by massive cooling systems and backup generators. [1, 2, 3]

- **Low-Frequency Noise (LF):** The cooling infrastructure (large industrial fans, chillers, and HVAC compressors) typically hums in the low-frequency range of **42 to 60 Hz**. These deep tones are a major source of community complaints because they carry over long distances and can easily penetrate walls.
- **High-Frequency Noise:** Air chillers, fans, and server components emit higher-frequency whining or buzzing sounds. [1, 2, 3]

2. Electrical Supraharmonics

Centers house thousands of servers, requiring massive power distribution units (PDUs) and Uninterruptible Power Supplies (UPS). [1, 2]

- **Frequency Range: 2 to 150 kHz**
- **Details:** The switching frequencies of power converters and electrical equipment within the facility generate "supraharmonics." This electrical noise can sometimes cause interference on the power grid. [1]

3. Electromagnetic Frequencies (EMF)

As facilities packed with high-capacity electrical equipment, data centers emit low-level, non-ionizing electromagnetic radiation. [1]

- **Radio Frequencies (RF):** Generated by networking gear and wireless communications equipment.
- **Electric & Magnetic Fields:** Localized fields generated around high-capacity power lines, transformers, and server power supply units.
- **Infrared:** Generated in the form of waste heat from operating servers. [1, 2]

Centers produce varying decibel readings depending on whether you are inside the facility or in the surrounding community. Inside, server areas and cooling systems generate loud, continuous noise requiring hearing protection.

Outside, the facility emits a persistent, low-frequency hum. [1, 2, 3, 4, 5, 6]

Inside the Data Center

- **General Aisles:** 75–85 dB(A). This is comparable to a loud vacuum cleaner or city traffic.
- **Server Zones / Racks:** 85–96 dB(A). This regularly exceeds the 85 dBA OSHA action level, requiring mandatory hearing protection for employees. [1, 2, 3, 4]

Outside the Data Center (Community Impact)

- **At the Property Line:** 55–85 dB(A). This continuous hum fluctuates based on generator load testing or the number of active cooling towers. [1, 2, 3, 4]
- **At a Distance (50–200 ft):** 60–70 dB(A). This sound level is often compared to a household dishwasher or a commercial air conditioning unit. [1, 2]
- **Over Long Distances:** Because of their constant 24/7 operation, cooling towers and generators produce low-frequency noise (under 100 hertz) that travels much further than high-frequency sounds. [1, 2, 3]

Why the "Hum" Bothers Neighbors

Standard noise meters use an A-weighted decibel scale dB(A), which is designed to mimic human hearing but often systematically downplays low-frequency rumbling. The massive chillers and slow-turning fans in data centers produce this deep, bass-heavy noise. These sounds travel easily through the air, vibrate through walls, and can cause sleep disruption, ear pressure, and chronic stress for nearby residents even when standard meters record seemingly safe volume levels. [1, 2]

Arizona is still an agricultural state as well as Pinal County. Pinal County hosts roughly 273,000 to 294,000 cattle and calves at any given time. Because beef and dairy production are split roughly down the middle, this means there are an estimated **135,000 to 145,000 beef cattle and 138,000 to 149,000 dairy cows** in the county, making them a leading livestock producer in Arizona. [1, 2, 3, 4]

Other large livestock are sheep in Pinal County with numbers decreasing since 2017. ⁶⁵ Maricopa does not keep records of livestock.

When the issue of noise pollution is emitted from centers is involved, livestock needs to be seriously considered. Research is currently being conducted on its effects upon livestock. Claton Tucker, a rancher in Lampasas, Texas, has expounded during his campaign for Texas Agriculture Commission of the dangers and harm to livestock from centers. ⁶⁶ These include but are not limited to massive loss of weight, sleep disorders, still births and inability to conceive. ⁶⁷

WILDLIFE

Arizona is visited by 46 - million people a year whom have the opportunity like our residents to travel and enjoy the magnificent and breathtaking wildlife, from the deserts to the mountains and canyons to alpine forest.

Arizona has wildlife that crosses over from Mexico, California, Nevada and New Mexico adding to its diversity, and consists of thousands of species ⁶⁸ in part:

Mammals

- **Predators:** Coyotes, bobcats, and occasional foxes or badgers, mountain lion, bobcat, black bear, and the endangered Mexican gray wolf.
- **Herbivores Desert Dwellers:** Desert mule deer, javelina (collared peccaries), and black-tailed jackrabbits, coyote, ringtail (Arizona's state mammal), coatimundi, and desert bighorn sheep
- **Small Wildlife:** Beavers, Round-tailed ground squirrels, desert pocket mice, and kangaroo rats.
- **Larg Wildlife:** Bears, Elk, Dear, Jaguars, Bob Cats.

Reptiles & Amphibians

- **Snakes:** Western diamondback rattlesnakes, gopher snakes, and coachwhips.
- **Lizards:** Common chuckwallas, zebra-tailed lizards, and side-blotched lizards.
- **Desert Tortoises:** They are occasionally spotted in rocky foothill areas.
- **Toads:** Red-spotted toads, which become more active during monsoon season.

Birds• Desert Birds: Greater roadrunners, cactus wrens, and Gambel's quail.

- **Birds of Prey:** Red-tailed hawks, kestrels, owls, and occasionally golden eagles.
- **Songbirds:** Various species that thrive in arid scrubland.

⁶⁵ Arizona Game and fish Webpage, 2026

⁶⁶ Clayton Tucker, Data center noise changed his whole ranch, Facebook.

⁶⁷ Clayton Tucker, Data Centers Linked to Health Crisis? Shocking Farmer's Tale, Facebook

⁶⁸ Arizona Game and Fish Website, Arizona's Wildlife.

ENDANGRED SPECIES



Gen Peterson: *Burrowing owls spotted in Maricopa, Arizona.* Facebook page.

Arizona is home to three mammals the Mexican Gray Wolf, Jaguar, Black-Footed Ferret, and one amphibian Sonoran the Tiger Salamander, one fish the Desert Pupfish, and one bird the California Condor on the endangered species list.⁶⁹ There are severe also on the Threatened Species list. The Burrowing Owl is a Species of Concern.

This desert oasis alone contains 101 stable bird species, with eleven potential colonization and sadly, eight potential expirations of species.⁷⁰ and monitored by the Maricopa Bird Alliance,⁷¹ where any given center project in Arizona, species would need to be identified, cataloged and pinned pursuant to NEPA and the Endangered Species Act.⁷²

BEES

These small but powerful creations are so misunderstood as mere insects when they are part of our wonderous wildlife. There are more than 1000 bee species in Arizona⁷³ and over 600 in Pinal County.⁷⁴ While a definitive county-wide, species-by-species checklist for Pinal County has not been formally published, one can expect to find a massive variety of solitary and social bees in the city of Maricopa.

Some of the most common and notable species found buzzing around yards and open spaces in towns like Maricopa, Florence, and Apache Junction include: [1, 2]

- **Western Honey Bee (*Apis mellifera*):** Both the managed European honeybees and the defensive Africanized honey bees.
- **Cactus Bee (*Diadasia rinconis*):** Specializes in pollinating native desert cacti.
- **Valley Carpenter Bee (*Xylocopa varipuncta*):** Large, sometimes fuzzy, and commonly seen drilling into wood.
- **Sonoran Bumble Bee (*Bombus 41onorous*):** Large and loud pollinators.
- **Green Sweat Bee (*Agapostemon spp.*):** Highly recognizable by their brilliant, metallic green coloring.
- **Leafcutter Bee (*Megachile spp.*):** Noted for cutting circular pieces of leaves to build their nests. [1, 2, 3, 4, 5]

⁶⁹ Arizona Game and Fish, *Endangered Species*

⁷⁰ Audubon Society, *Saguaro National Park*

⁷¹ Maricopa Bird Alliance

⁷² Environmental Protection Agency, Summary of the Endangered Species Act, 16 U.S.C. §1531 et seq. (1973).

⁷³ Stephen L. Buchmann 1, Stacey Bealmeear 2, Scott Prajzner 3, Vicki Wojcik 4, *University of Arizona, Arizona Bee Identification Guide.*

⁷⁴ Desert Museum, *The A Bee Cs of Arizona's Native Bees*, May 14, 2021.

The purpose of bees is diverse, and without it we would not have the immense variety of foods and in such great numbers. Bees serve two primary purposes in the ecosystem: **pollination** and **honey/wax production**. By moving pollen between flowering plants, they fertilize them, allowing the plants to reproduce and grow.

They are essential to the environment and human food supply. [1, 2, 3, 4]

Why Pollination Matters

- **Food Supply:** Bees pollinate roughly one-third of the food humans eat, including a vast majority of fruits, vegetables, and nuts (e.g., apples, almonds, blueberries, and avocados). [1, 2, 3]
- **Biodiversity:** They pollinate 75-80% of all flowering plants on Earth. This plant reproduction creates seeds, berries, and fruits that sustain wild birds, mammals, and other insects up the food chain. [1, 2, 3, 4, 5]
- **Economic Value:** The agricultural impact of bee pollination is massive, globally worth hundreds of billions of dollars annually. [1]

Products and Ecosystem Health

- **Honey and Wax:** Bees collect nectar and pollen to feed their colonies, producing honey, beeswax, and royal jelly. Honey also possesses natural antibacterial properties.
- **Habitat Maintenance:** Without bees, the diversity of plant life would rapidly decline, leading to a collapse of the local ecosystem. [1, 2, 3, 4]

The relationship between bees water and crops is paramount to the drought conditions in Arizona and Pinal County. Pinal County farmers have seen their Colorado River allocations from the Central Arizona Project (CAP) completely cut off, losing up to 100% of their surface water. Consequently, they have been forced to leave roughly 50% of their irrigated farmland unplanted and rely heavily on groundwater. [1, 2, 3]

Pinal County growers hold some of the lowest priority rights to the river, they bear the brunt of the state's drought cutbacks. This abrupt end to direct canal water has forced farmers to adapt through several drastic measures as increased prison farming has not helped: [1]

- **Fallowing Land:** Many farmers have left half or more of their acreage barren, abandoning crops like cotton and alfalfa. [1, 2]
- **Switching to Groundwater:** Farmers are relying almost entirely on local aquifers, drilling expensive new wells and utilizing more efficient irrigation pivots rather than flood irrigation. [1, 2, 3, 4]
- **Revenue Drops:** The severe cuts have caused massive revenue losses and job reductions within the country's \$2.3 billion agricultural sector. [1, 2]

The bottom line is without adequate water crops will not grow and bees cannot work and do their instinctive work.... **Pollination**. The result is that we have reduced crops and food supply, diminished honey supply, and our indispensable bees then die off.

To heighten this drought issue is the effect of environmental **noise pollution** upon bees. Research indicates that specific electromagnetic field (EMF) frequencies interfere with honey bee navigation, foraging, and overall colony health. The most commonly identified frequencies that negatively impact bees fall into three main ranges: [1, 2]



Arizona Farm Bureau: *You Lose If Pinal County Ag Loses Water*: 1/30/2019 [Video](#)

Extremely Low Frequencies (ELF-EMF)

- **The Frequency:** 50 Hz
- **The Source:** Power lines, high-voltage transmission towers, and electrical infrastructure.
- **The Impact:** Studies show that bees exposed to 50 Hz frequencies experience physiological stress (producing more heat-shock proteins), reduced learning ability, and altered flight dynamics. It also disrupts their homing ability, meaning foraging bees often cannot find their way back to the hive. [1, 2, 3, 4, 5]

Radio Frequencies (RF-EMF)

- **The Frequency:** 900 MHz
- **The Source:** Mobile phones and older cellular communication networks.
- **The Impact:** Exposure to the 900 MHz band has been linked to severe behavioral changes. Research shows it can disrupt the natural communication signals of worker bees (worker piping), hinder the development of queen pupae, and cause navigation failure. [1, 2, 3, 4]

Microwave / Wi-Fi Frequencies

- **The Frequencies:** 2.4 GHz and 5.8 GHz
- **The Source:** Modern Wi-Fi routers, smart meters, and wireless communication devices.
- **The Impact:** Bees rely on natural electromagnetic cues and the Earth's magnetic field to navigate. Ubiquitous exposure to these higher-frequency Wi-Fi signals has been shown to alter bees' short-term memory, decrease adult longevity, and negatively affect brood development. [1, 2, 3]

Why Frequencies Affect Bees

Bees are highly sensitive to electromagnetic fields because they rely on them for their created survival. They use Earth's magnetic field to navigate, communicate through the electromagnetic signature of their "waggle dance," and regulate hive behaviors using natural cues. Anthropogenic (man-made) frequencies "jam" these natural signals, acting as an environmental stressor that can cause disorientation, dehydrate and then die off.

CITY DISCREPANCIES

Maricopa is one of the first cities with a population over 10,000 that is observed which does not have any formable, expansive environmental programs, plans, policies or procedures in place, but rather only limited reference in building ordinances.

With the growth of the city, which may have industry in the future and possibility of a center and BESS projects, it would be incumbent and beneficial for the city to develop overall environmental assets, and more specific codes for centers and BESS projects without just making general reference to a state of federal law and regulations.

Municipalities developing ordinances and codes for centers must balance high tax revenues against community impacts. Critical items include but not limited to **noise limits** (HVAC/generators), **power grid impacts** (substations, energy storage), **water consumption** and wastewater, **setbacks and aesthetics**, and a legally binding **decommissioning plan**. [1, 2, 3, 4, 5, 6, 7] Those municipalities within Arizona that have developed codes are a presentable start, but lack many fundamental components to protect human health, energy, water the environment, property and the economy.

The most important item in this arena is that the city of Maricopa must be ready and capable of addressing many questions, **to help the community, the public engage in informed, transparent, and respectful conversations about proposed center development.** [emphasis added] The recent guidelines provided by Penn State University Extension is a formidable resource. ⁷⁵

To comprehensively address these facilities, local governments should adopt a comprehensive and integrated approach across the following areas:

Unsolicited & Solicited Proposals

- **Applicants & Principals:** Must approach with clean hands with a view towards transparency to the municipality and its residents.

⁷⁵ Penn State Extension, *Data Centers: A Guide to Common Questions*, April 2, 2026.

- **Offers:** That no offer towards or for a non-disclosure agreement (NDA) will be made.
- **Communication:** All verbal, written and email communications will be recorded and logged.
- **Notices:** Arizona Environmental, Water, Land, Energy, Safety laws supersede federal by Primacy and Ceiling Preemption.

2. Land Use & Site Planning

- **Zoning Districts:** Restrict data centers to heavy industrial opt to with special codes or as Extremely High Industrial (EHI) due to 24/7 operations and impacts. [1, 2, 3, 4]
- **Setbacks & Buffers:** Establish rigorous setbacks from residential and institutional uses, incorporating visual buffers such as berms or landscaping. [1, 2, 3]
- **Aesthetics & Architecture:** Prevent "big box" blight by mandating architectural features that resemble typical office buildings and requiring rooftop screening for heavy equipment. [1]

3. Environmental & Utility Impacts

- **Noise Mitigation:** Data centers run 24/7. Codes must set strict, enforceable decibel (dB) limits at property lines. Require pre- and post-construction A-weighted (high-frequency) and C-weighted (low-vibration) noise studies. [1, 2, 3]
- **Water & Wastewater:** Evaluate the impact on local municipal resources. Mandate closed-loop cooling systems, regulate water withdrawal, and require drought-response plans if the facility relies on public utilities. Require water pretreatment and water reuse before discharged to sewer system. No discharge to a water way, well or land. [1, 2, 3, 4]
- **Energy & Sustainability:** Address backup power generators, on-site energy storage, and waste heat management in municipal building and fire codes. Require developers to analyze the demand on local electrical grids and consider solar-ready or green-roof designs. [1, 2, 3]

Community Impact & Safety

- **Emergency Preparedness:** Require comprehensive Emergency Response Plans. Address hazardous materials, battery safety, and local first responder training. [1, 2, 3, 4]
- **Traffic & Road Wear:** Regulate construction traffic and establish routing plans to protect local roads. [1]

- **Economic Offsets:** Since data centers generate low employment densities relative to their footprint, use development agreements to address cost-sharing for infrastructure, workforce training, and phased construction impacts. [1, 2, 3]

Code Administration & Legal

- **Decommissioning:** Enforce a legally binding Decommissioning Plan (with financial surety like bonds) to ensure the site is cleared and restored if the facility becomes obsolete.
- **Clear Definitions:** Update municipal dictionaries to explicitly define the term "Data Center," "Specific Types," "Accessory Structures," and "Colocation".
- **Model Ordinances:** Use established frameworks for reference, such as the Data Center Ordinance Guide by Montgomery County, PA or the comprehensive framework from the Data Center Toolkit published by Pennsylvania's DCED. [1, 2, 3, 4, 5]

ECONOMIC IMPACT

One of the largest concerns is that of the availability of the agents and principals to obtain billions of dollars of funding, e.g. on their own, hedge funds, mass umbrella sharing, banking through Chase Manhattan or Bank of America, etc. When entering the arena with a location and through government, there is no written guarantee that they are solvent, no offer of proof. When you purchase a vehicle and go through the last stage in the finance department, you cannot drive off the lot in the vehicle without offering proof of security towards the vehicle. It is the same in any other construction project, but centers contend they are exempt, why so?

The economy would boost while construction is going on for lodging, food shopping and even recreation, and slow down to a minimal amount as construction winds down afterwards. Centers are not known for generating revenue through employment. They do not offer paid tours to the public due to security concerns and clean-room environments, only to those in government to bolster their position.

An intrinsic component is the devaluation primarily of residential real property. Depending on the location property and proximity to a center, it can diminish up to 25% like the *Menlo Digital's project* in Ahwatukee, Arizona which is 200 feet $\geq$ from apartments and housing, *supra* at page 33 and 34.

The city of Maricopa to itself and extends to the surrounding prosperous Indian and county communities and lands. As such, the city does not take into consideration the totality of economic gain from agriculture, livestock, commercial and industrial entities within the city outwards for economic base, or those that support those entities and the Maricopa community that utilizes products and services from them. The city is even separate from doing business with the chamber of commerce.

With the pending serious drought in Arizona extending to Pinal County and Maricopa, the economics of agriculture and livestock have already been seriously diminished. By December, this will soon extend to commercial and industrial entities but show up supply shortages and quality markers as food costs climb. Sustainability originated in part as a business term affecting a circular process which is returning to linear. Any center of BESS project will contribute to the decline.

It has been the norm for tax incentives to be a controlling factor for applicants and principals for projects and negates the rights and interests of the local citizens. Being that Arizona has placed a moratorium on tax incentives it is not enough, as each county and municipality should have followed suit. As of July 1, 2026, the State of Arizona issued a moratorium and removed the subsidizing of servers through taxes.

However, the federal tax scheme allows centers to write off the cost of servers and heavy equipment immediately through 100% bonus depreciation for property placed in service before January 1, 2030. [1] This is one reason for the fast-paced demand to build centers though not needed. There are incentives that municipalities offer to project applicants that may be ethically impermissible.

After a project is completed, there is nothing left except a shell for a building that does not supply anything for retail or ship anything commercially, or manufacture anything industrial but rather continues to cause harm to humans and the environment with excessive noise, air pollutants and consumption of energy and water, and waste discharge. This negative process causes a regression in the quality of life and will have a substantial destructive impact on the economy with declining health conditions and contributor of deaths over the years. Centers and BESS projects are not a sustainable business dynamic for any community.

JOBS

A project could employ up to 500 different skilled union temporary construction union jobs in various trades and professions on and off and trickles down towards completion. These are drawn from all over Arizona and the country. Once finished each building will have professional management, security, professional certified HVAC Technicians, facilities technicians, janitors etc. Not much of a draw from the area once finished due to the skills required and security clearance. According to HR at CyrusOne facility for Chandler, they have ten (10) center buildings with 2,000,000 sq. ft. Technical IT Space and employ only 65 skilled people.

The square millage per acre of a given project displaces more space than that of commercial business that would employ more people, 2 to 5 people per acre, several thousand more than a hyper scale project site, like La Osa in Pinal County. The industry touts one can calculate that there could be as many as 50 jobs per 250-K square feet of data floor space.

The trend now is to share labor between buildings on large campuses to save manpower and costs. Some tenants that lease space in each center may want to supply their own staff. This is why the reality is 6 or 7 employees per building, a very small-scale and highly skilled employer with security clearances.

When considering the project at Thistle Landing in Ahwatukee, which consists of five buildings at 1,022,400 sq ft on 38.3 acres, on average they would have a maximum of 6 to 7 employees per building and by square footage will only need and have 25 to 30 employees total that less than half of CryusOne in Chandler. Once again, this project is not producing any retail, commercial or industrial output or positive economic impact as it is not their function and not in a properly coded district for *Menlo Digital's* operations, *supra* page 33 and 34. [emphasis added]

Quantum facilities at present are research orientated with scientists and engineers and support staff. There is not any information forthcoming on any employment scenarios for Data and AI facilities. It is reasonable to expect the numbers to be different because the actual facilities will be smaller than the research facilities and current centers. The Quantum labor force of the future will be primarily MS and PhD scientists and engineers, and technicians.