LA OSA – WATER MEMO ADDENDUM

The purpose of this memo is to document the anticipated water demands associated with the La Osa project related to power generation and data center cooling compared to general industrial land uses that were documented in the "Preliminary Water Memo" dated January 6, 2026.

The Preliminary Water Memo utilized standard demand factors for general industrial uses that are utilized by the utility provider, Global Water, as they do not have documented demand factors for either power generation data center land uses and more specifically the cooling systems associated with data centers. Other minor water demands, such as those associated with general employees, maintenance operations and/or landscape irrigation are not considered in this memo given their minor proportionate share of overall demands, other than what is captured in their standard demand factors.

Power Generation Water Demands:

It is understood that the La Osa project will utilize natural gas generation plants that utilize gas combustion turbines with air cooling systems paired with spray intercooling to reduce air temperature and increase generator output. EPS Group has reviewed two recent gas plant permit applications on file at the Arizona Corporation Commission to find water usage projections for comparable technology. Below is a summary of those two projects:

- Project Barraca: Located at the northeast corner of Olive Avenue and Bullard Avenue in the vicinity of Luke Air Force Base. Consists of 18 separate 38.9 megawatt (MW) natural gas combustion turbines (CTs) with a total name plate capacity of approximately 700 MW. Water consumption for the generation facilities is estimated to be a maximum of 100 acre feet per year.[1] Average Demand = 0.14 acre-feet per megawatt
- SRP Coolidge Generating Station Expansion: Located east of State Route 87 between Kleck Road and Randolph Road. Consists of the addition of 16 General Electric (GE) combustion turbine generators (CTGs) designed to produce up to 820 MW of net electrical output. Based on the anticipated operating profile of the CEP it is expected the facility will use about 250 acre feet/year.[2] Average Demand = 0.30 acre-feet per year per megawatt.

Utilizing the water usage demands documented the aforementioned recent gas plat permit application it is estimated that likely water consumption for the project would be:

Anticipated Generation (MW)	Demand Range (Acre-Fee/YR/MW)	Avg Annual Demand (Acre-Feet)
2,000	0.14-0.22	280-600

Data Center Cooling System Water Demands:

It is understood that the La Osa project has stipulated in its zoning application that it will utilize only a closed loop cooling system. Closed loop cooling systems is a technology who's leading data center operators purport to eliminate evaporation or wet cooling associated with the cooling process of data centers. As a result, the expected operational water usage associated with data center cooling is near zero. Many of the leading data center operators suggest that their efforts to move towards a sustainable cooling system has led to a near zero water loss suggested above, however, it should be noted that their scientific research to validate those claims is proprietary and has not been verified by the writer of this memo. The following are excerpts from their websites:

- Microsoft™: "Beginning in August 2024, Microsoft launched a new datacenter design that optimizes AI workloads and consumes zero water for cooling. By adopting chip-level cooling solutions, we can deliver precise temperature control without water evaporation. While water is still used for administrative purposes like restrooms and kitchens, this design will avoid the need for more than 125 million liters of water per year per datacenter."[3]

- Meta™ (Facebook): "Depending on local conditions, our typical data center design utilizes a direct-to-chip liquid, closed-loop cooling system with dry coolers. In these systems, a coolant is circulated through our data halls in a closed piped system to absorb the heat generated by our servers and hardware. The heat is then removed by operating dry coolers that blow air over the pipes, carrying away excess heat. For these data centers, there is no operational water use in the cooling system and water use at the site is minimal and limited to domestic and janitorial needs, equipment cleaning, and fire protection. Our Beaver Dam, Wisconsin data center will feature this closed-loop, liquid-cooled system with dry coolers, and the total estimated annual water use for the data center, once operational, is anticipated to be less than that of two full-service restaurants in a year."[4]
- Stream™: "At Stream, we're proud to say that none of our data centers require routine daily water consumption for IT cooling thanks to closed-loop systems. These systems are filled once, and then that same water inside is constantly recycled and reused, making them a go-to for many sustainable, efficient data center developments. With closed-loop cooling, a large-scale data center actually consumes less water per square foot than an office building (and often much less than other types of industrial developments [ ]). In these cases, most of our usage is for standard domestic uses like sinks and toilets."[5]

Alternative Land Use Comparison of Water Demand:

Other alternative land uses that are seen throughout Pinal County and are presented to provide a comparison between the water demand associated with the proposed land use to provide context, utilizing the approximate 2,127-acres of developable land. and those demand to understand the relative demand of this project. The industrial acreage included in this project for development totals 2,127 acres. The following table identifies the estimated water demand associated with the industrial land use that is documented in the "Preliminary Water Memo" along with conservative projections of water usage for farmland and single family residential on the same land area that is being considered for the proposed data center cooling and gas generator associated with a data center.

Land Use	Avg Annual Demand (Acre-Feet)
Farming	9,146
Industrial	4,297
Residential	2,084
La Osa	280-600

Where:

- Farming Demand[6] = 4.3 acre-feet per year per acre (Arizona)
- Industrial Demand[7] = 1,800 gallons per day per acre = 2.02 acre-feet per year per acre
- Residential Demand[8] = 250 gallons per day per dwelling unit = 0.28 acre-feet per year per dwelling unit (Assumes and average density of 3.5 dwelling units per acre)
- La Osa Demand = 0.14-0.22 acre-feet per year per megawatt for power generation assuming cooling system demand utilizing closed loop cooling system is near zero as advertised.

Conclusions:

The La Osa project is anticipated to utilize less water than an equal size farm, industrial development or residential community when the specific technology is considered.

References:

[1]Arizona Corporation Commission (ACC). (October, 2025). *Application for a Certificate of Environmental Compatibility*, Docket No. E-00047060. Phoenix, Arizona.
https://docket.images.azcc.gov/E000047060.pdf

[2]Arizona Corporation Commission (ACC). (December, 2021). *Application for a Certificate of Environmental Compatibility Coolidge Expansion Project*, Docket No. 0000205474. Phoenix, Arizona.
https://docket.images.azcc.gov/0000205474.pdf?i=1776795116472

[3]Microsoft Corporation. (2024, December 9). *Sustainable by design: Next-generation datacenters consume zero water for cooling.* Microsoft Cloud Blog.
https://www.microsoft.com/en-us/microsoft-cloud/blog/2024/12/09/sustainable-by-design-next-generation-datacenters-consume-zero-water-for-cooling/

[4]Meta Platforms, Inc. (2025, December 17). *Advancing water stewardship in Meta's data center communities.* Meta Newsroom.
https://about.fb.com/news/2025/12/advancing-water-stewardship-in-metas-data-center-communities/ [about.fb.com]

[5]Stream Data Centers. (2026, April 24). *Ale vs AI: A (surprising) look at water in the developing West.*
https://www.streamdatacenters.com/articles/ale-vs-ai/

[6] U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS). (2024). *2022 Census of Agriculture – Irrigation and Water Management Highlights.* Washington, DC.
https://www.nass.usda.gov/Publications/Highlights/2024/Census22_HL_Irrigation_4.pdf

[7|8] Global Water Resources Design and Construction Standards, Section I.1 Water Demands
https://www.gwresources.com/_files/ugd/e82d34_9e1a2284d82a4129b3bed82ab2703fac.pdf