



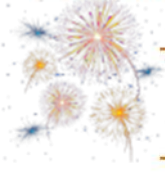
JULY 2026



WATER & POWER ASSOCIATES, INC.

# NEWSLETTER

\*\*\*\*\*



## Data Centers, AI and the Power Grid:

### What It Could Mean for Los Angeles and LADWP Customers

By Jack Feldman

Artificial intelligence (AI), cloud computing, streaming services, and digital applications are driving rapid growth in one of today's least visible but most essential forms of infrastructure: data centers.

But not all data centers are the same.

Traditional data centers support internet services, business operations, cloud storage, and digital communications. AI oriented facilities are designed for advanced computing and often use dense computer equipment and specialized processors that require much more electricity and cooling.

Across the United States, large AI and cloud data centers are increasingly being proposed in regions that offer lower electric costs, available grid capacity, reliable service, favorable permitting, and strong fiber connectivity. Northern Virginia remains the nation's largest data center market, followed by major growth in Texas, Arizona, Georgia, Nevada, Oregon, and parts of the Midwest.

California already hosts more than 200 active data centers, most of them traditional facilities. Los Angeles County appears to host roughly 70 to 80 facilities of various types. However, there does not appear to be a public count separating AI oriented facilities from conventional data centers within either Los Angeles County or LADWP service territory.



An aerial view of a 33 megawatt data center (LOWER L) with closed-loop cooling system, amid warehouses on October 20, 2025 in Vernon, California. A surge in demand for AI infrastructure is fueling a boom in data centers across the country and around the globe. Source: Salon

Much of today's utility and policy discussion focuses on a smaller but growing group of more energy intensive AI facilities.

Southern California has not become a major AI data center market at the same scale, but projects in the region suggest utilities and local governments are beginning to evaluate how future growth could affect infrastructure planning, water use, reliability, and customer costs. Recent actions in Monterey Park also show that communities are beginning to ask broader questions about how data centers fit into local planning and infrastructure needs.

For LADWP customers, the issue connects to broader long-term planning already underway.

(Continued on page 2)



**OFFICERS**

Julie Spacht  
President

Paul Shultz  
First Vice President

Jim McDaniel  
Second Vice President – Policy

Winifried Yancy  
Third Vice President - Advocacy

Ken Silver  
Secretary

Donny Sievertson  
Assistant Secretary

Bill Engels  
Treasurer/Membership

Phyllis Currie  
Asst. Treasurer

Jerry Gewe  
Historical Preservation

Bill Glauz  
Newsletter Editor

Jack Feldman  
Webmaster

**BOARD OF DIRECTORS**

Marty Adams  
Rod Fishburn  
Grant Hoag  
Jack Humphreville  
Larry Kerrigan  
Razmik Manoukian  
Saif Mogri  
Scott Munson  
Steve Pruett  
Susan Rowghani  
Jack Waizenegger  
Robert Yoshimura  
Walter Zeisl

LADWP continues preparing for electrification, renewable integration, reliability requirements, and implementation of its LA100 clean energy transition while upgrading aging infrastructure. Recent planning discussions suggest that possible future data center loads are beginning to appear in long-term demand forecasts, although the scale and timing remain uncertain.

Large new electric loads may require utilities to invest in substations, distribution facilities, transmission capacity, and system reliability.

California has already begun addressing these questions. In 2025, CAISO approved more than \$2 billion in transmission upgrades in the South Bay region tied to future data center and electrification growth. Senate Bill 57, signed in 2025, directs regulators to study how growing electricity demand from data centers could affect utility customers and future infrastructure planning.

As AI and digital services continue expanding, utilities, regulators, and customers are increasingly focused on one central question: how can future growth be supported while maintaining reliability, affordability, and efficient planning for all customers?

## **The Mono Lake Committee Resumes the attack on Los Angeles' Mono Basin Water Supply**

*By Jerry Gewe*

The Mono Lake Committee (Committee) has resumed its efforts to limit the water being supplied to Los Angeles from the Mono Basin. The State Water Resources Control Board (Board), in 1994, after extensive studies and contentious hearings established a plan for allowing Mono Lake to reach an elevation of 6,393 feet above sea level. This, they determined, would provide for a balance between the need for water in Los Angeles and an environmentally sustainable Mono Lake. Under this determination, Los Angeles has been allowed to export up to 16,000 Acre Feet (AF) of water each year and the level of the lake has risen by 8 feet.

Recently the Committee has approached the Board requesting that Los Angeles be ordered to cease all exports until the lake reaches its target elevation. The Lake has not risen as rapidly as estimated based upon the models used in establishing the flows, due to climate change. However, the modeling shows that the lake level will continue to rise to the established level with continued annual diversions of up to 16,000 AF within about 4 years of when it would with no diversions.

*(Continued on Page 4)*



(Mono Lake, Continued from Page 2)

While 16,000 AF seems small in comparison with the annual consumption of 450,000 Acre Feet per year within the City of Los Angeles, it has a significant impact on the water bills of Angelenos. There is the cost of purchasing an equivalent quantity of water from the Metropolitan Water District (currently at least \$16.5 million, and up to \$22.7 million, if treated water is required). In addition, there is the loss of the 31,350 Megawatt-Hours of green power that is generated as the water flows through the hydropower plants on the way to Los Angeles. This has a current value conservatively estimated at \$1.25 million per year.

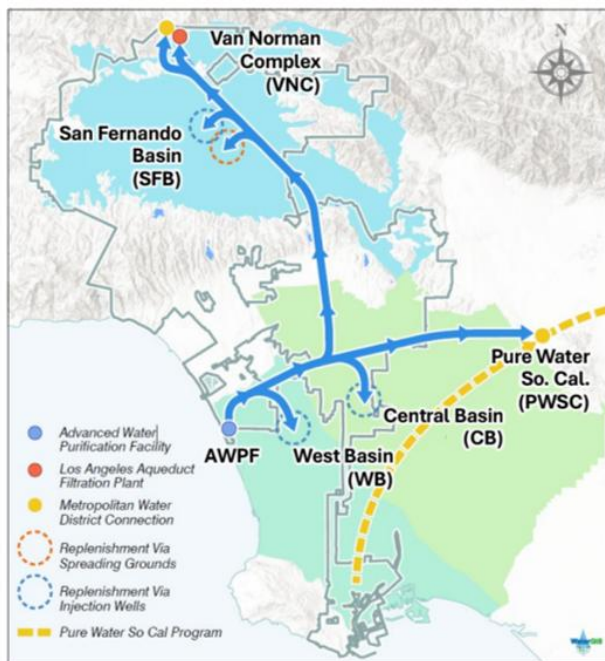
These costs will increase substantially over the next few years as the cost of MWD water is projected to increase by 6% to 7% per year.

It has been suggested, by a previous LADWP Commissioner, that Los Angeles could replace the lost water with the recycled water that will be developed through the recycling of water from the Tilman Treatment plant in the San Fernando Valley. However, this water will be even more expensive than the MWD Water. It will be required to maintain the current level of supply reliability and thus will not be available to replace the water from Mono Basin, if it were not available.

While LADWP needs to operate its Water System on an environmentally sound basis. It also needs to consider the economic impact on its customers as it makes its decisions.

## Pure Water Los Angeles

By Julie Spacht



Pure Water Los Angeles is a collaborative effort between the Department of Water and Power and the LA Bureau of Sanitation to produce 230 million gallons a day of purified recycled water from the Hyperion Water Reclamation Plant in Playa Del Rey.

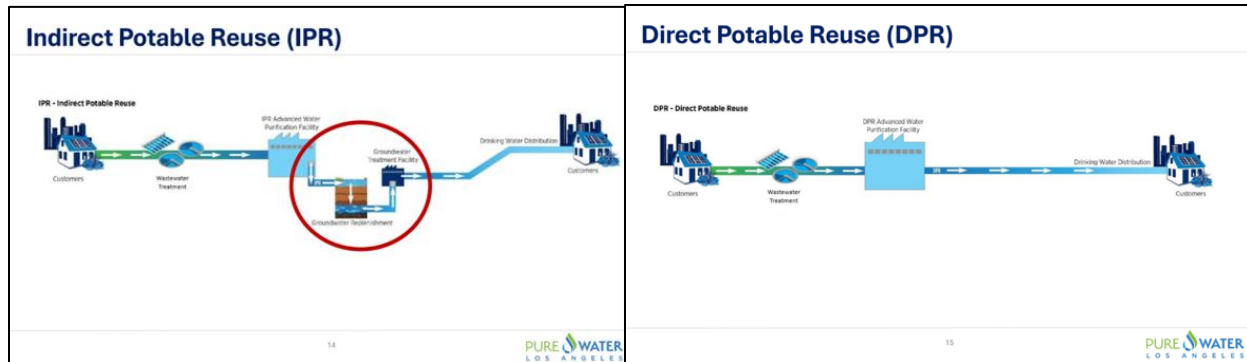
The objective of the program is to diversify Los Angeles' water supply portfolio by developing and maximizing Hyperion WRP effluent as a sustainable local water supply, which will mitigate future climate change and other risks associated with imported water.

Goals of the Program are to:

- Develop and Maximize Hyperion effluent as a sustainable water supply
- Construct and upgrade existing infrastructure in a cost-effective manner
- Diversify Los Angeles' water supply portfolio

- Increase water supply resilience, reliability and sustainability
- Provide community benefits
- Improve environmental stewardship and protection of ecosystems

The proposed combined treatment process will further purify secondary treated effluent at Hyperion through a membrane bioreactor which provides cleaner water for subsequent purification and significantly reduces discharged pollutants. The resultant water is then available for Indirect Potable Reuse (IPR) for augmenting groundwater and ultimately Direct Potable Reuse (DPR). IPR water would be spread in regional groundwater basins to recharge local aquifers. DPR would be transported to the Van Norman Complex in the northern San Fernando Valley for further treatment at the Los Angeles Aqueduct Filtration Plant. Both IPR and DPR are California Department of Health Services approved methods.



The cost of the program is estimated at \$25 billion dollars (2024 dollars).

A Program Implementation Plan and the Pure Water Los Angeles Master Plan have been completed. The Program Environmental Impact Report is in progress and expected to be completed in 2027. Water and Power Associates members are monitoring the program through the Equity Strategies Group formed specifically for this purpose and the Pure Water LA Stakeholder Engagement Group.

## LADWP Advances Clean Energy Goals with Utah Solar 1 Power Purchase Agreement

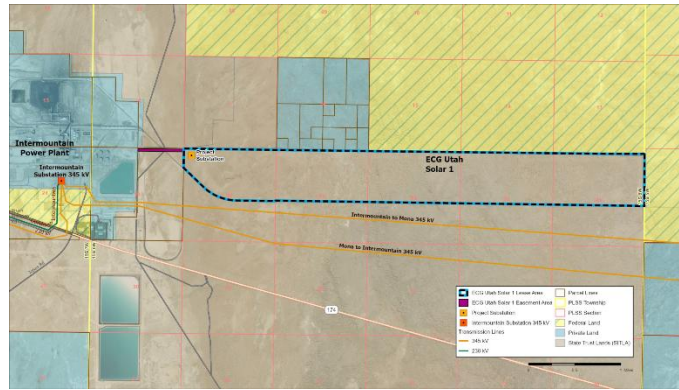
By William Glauz

The Los Angeles Department of Water and Power (LADWP) has taken another significant step toward its clean energy transition through a newly approved power purchase agreement (PPA) for the Utah Solar 1 Energy Project. The PPA, executed through the Southern California Public Power Authority (SCPPA), secures long-term renewable energy from a large-scale solar facility currently under development in Millard County, Utah.

Announced on May 29, 2026, the 30-year PPA was signed between SCPPA and EDF Power Solutions North America, the developer of Utah Solar 1. Under the agreement, LADWP will receive the full output of the project, which is designed to generate 400 megawatts of direct-current solar capacity, equivalent to approximately 300 megawatts of alternating-current capacity delivered to the grid. The project is expected to begin commercial operations in mid-2027.

Located on approximately 1,750 acres of state-owned land managed by the Utah Trust Lands Administration, Utah Solar 1 represents one of the latest additions to LADWP's growing portfolio of renewable energy resources.

LADWP officials have emphasized that the project will strengthen both reliability and affordability while supporting the utility's long-term decarbonization plans. The solar facility is also expected to complement other energy investments in Utah, including the ongoing transition of the Intermountain Power Project toward cleaner fuel sources such as hydrogen. According to LADWP leadership, securing large-scale renewable resources from neighboring states remains a key component of maintaining grid reliability while expanding clean energy generation.



Beyond its environmental benefits, Utah Solar 1 is expected to generate substantial economic impacts for the host region. EDF estimates that peak construction will support approximately 400 jobs and produce more than \$40 million in local tax revenue over the life of the agreement, along with roughly \$27 million in lease revenues for the Utah Trust Lands Administration. The facility is projected to generate approximately 766 gigawatt-hours of renewable electricity annually once operational.

With a long-term buyer secured and development progressing, the Utah Solar 1 PPA marks an important milestone in LADWP's effort to build a more sustainable and resilient power supply for Los Angeles customers while advancing regional clean energy development across the western United States.

## A New Water Source for Kona: My Experience with OceanWell

By Jeff Bray

For the past year and a half, I have been working with OceanWell on a large-scale water supply initiative for Hawaii's Big Island.

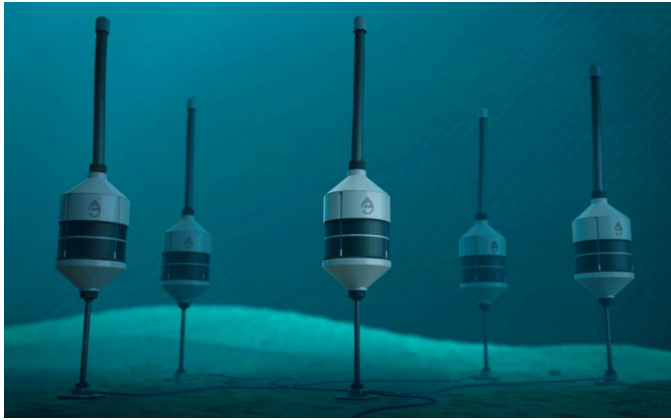
### The Problem

Kailua-Kona, on the west side of the Big Island, faces a verified water deficit of over 5 million gallons per day (MGD) — a demand that the existing county system cannot serve. Housing projects are stalled. Businesses cannot expand. Native Hawaiian families are leaving because affordable housing cannot be built without a water supply to support it.

The underlying causes have converged into a serious structural constraint. The state has effectively halted drilling new groundwater wells, pending the development of a multi-year aquifer management process. No new production wells have been completed in Kona in over a decade.

### The Solution

The approach being pursued is to bring 10 million gallons per day of fresh desalinated water directly from the Pacific Ocean into the county distribution system — bypassing groundwater permitting entirely. OceanWell, is developing a deep water, offshore desalination module that can be scaled up by adding modules. This will be capable of producing potable water at the shoreline on a meaningful scale.



Rather than detail the engineering (to be addressed in a future article), what matters most is what the system accomplishes: potable water, delivered to the shoreline and fed into the existing county network through a connector infrastructure of pipelines, pump stations, and storage. A three-lift pump system will move water from sea level to a 650-foot storage tank, supplementing existing gravity-fed pressure zones across a twelve-mile corridor serving Kona's primary development areas. The system

is planned to be completed in 5 years with delivered water costs projected to be competitive with existing county rates by the time it is operational. Additionally, this proposal will allow the county to back off of pumping about 4 MGD of water from wells located at around 1,600' elevation, resulting in a dramatic shift downward in power consumption on the island.

### The Economics

For the past 25 years, new water in Kona has been developed through private investment. Individual entities have drilled wells at current costs of approximately \$12–15 million per well, each yielding roughly one million gallons per day. The proposed connector infrastructure linking OceanWell to the county system is estimated to cost approximately \$46 million and will be capable of delivering 10 million gallons per day. That is ten times the water supply for roughly three times the cost of a single well. On a per-gallon basis, the OceanWell connector is dramatically more cost-effective than any well drilled in Kona in a generation.

### Where Things Stand

The project has broad support — from the Kona Mayor's office, the Department of Water Supply, county council members, state legislators, Native Hawaiian advocates, and major private developers. A Memorandum of Understanding with the county water system is being pursued, and a Phase 1 hydraulic feasibility study is the immediate next milestone.

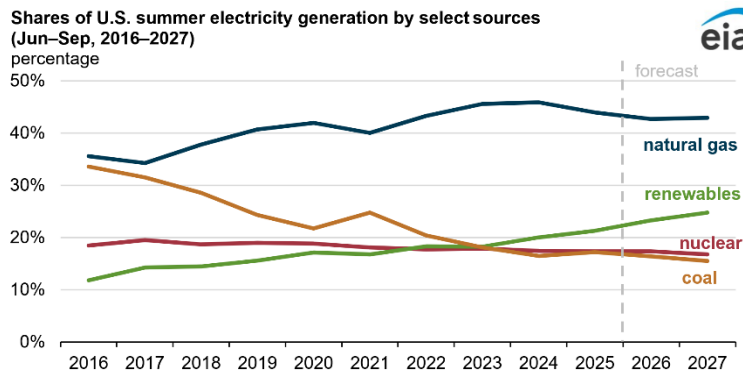
If this project reaches its potential, the outcome is straightforward: housing can be built, businesses can grow, and families who have left the island for lack of affordable options may have a reason to return. The water problem in Kona has resisted traditional solutions for over a decade. This approach is different — and the case for it is sound.



# Outlook for Natural Gas Consumption in U.S. Electricity Generation During Summer 2026

By William Glauz

Natural gas is expected to remain a cornerstone of U.S. electricity generation during the summer of 2026, but overall consumption is projected to stay largely flat compared with the previous year. According to the U.S. Energy Information Administration, natural gas use in the electric power sector is forecast to average roughly 43.7 billion cubic feet per day during the June–September 2026 summer period. This level is nearly unchanged from summer 2025 and remains modestly above recent historical averages.



The stability in gas demand reflects a power sector in transition. On one hand, electricity consumption in the United States continues to grow, driven by expanding data center capacity, increased electrification, and gradual industrial recovery. On the other hand, much of this incremental demand is being met by rapidly expanding renewable energy sources, particularly solar.

As a result, natural gas is not seeing proportional growth in generation despite higher overall electricity needs.

Solar power, supported by growing battery storage capacity, is increasingly displacing natural gas during midday and early evening peak periods in many regions. This reduces the need for gas-fired plants to ramp up as frequently as they did in prior years. At the same time, coal-fired generation continues its long-term decline, but much of that displacement is also being absorbed by renewables rather than by natural gas.

Weather remains a key variable in the outlook. Hotter-than-normal summer temperatures could temporarily increase gas consumption for electricity as air-conditioning demand rises. However, in typical weather conditions, the market is expected to remain balanced, with natural gas continuing to function primarily as a flexible backup resource that supports reliability when renewable output fluctuates.

Looking beyond 2026, the trajectory begins to shift more noticeably. The EIA projects that gas-fired generation could increase in 2027 as electricity demand growth begins to outpace renewable additions in certain regions. This suggests that 2026 may represent a transitional plateau year: gas remains essential to grid stability, but its role in meeting incremental demand is temporarily constrained by strong renewable growth.

In summary, summer 2026 is expected to reinforce natural gas's position as a critical balancing fuel in the U.S. power system, rather than a growing source of generation. It will remain heavily used, but largely stable, as the electricity mix continues to evolve toward a higher share of renewables.

# Colorado River Update

By Jerry Gewe

The long-term drought along with the lowest snowpack on record and the record-breaking March heat have combined to elevate the risk that the Colorado River Basin will be unable to meet the needs of the 40 million people using the Basin Supply this year. Storage on the system is at about 36% of capacity and the lowered reservoir elevations leave the ability of the hydroelectric power plants to provide normal electrical generation at risk.

Negotiators from the seven basin states, Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming have been meeting regularly to discuss the status of the supply and develop plans for operating the system under these conditions.

These seven basin states have been unable to reach consensus on an operating framework for operations in 2027 and beyond, when the current operating framework, developed 20 years ago, expires this year. If a consensus is not reached by the fall, the Department of the Interior is preparing to establish operating criteria. However, many of the states have been “lawyering up” in anticipation of taking legal action to protect their interests.

On a positive note, there is an effort to explore the feasibility of establishing a framework for inter-state exchanges of desalinated and recycled water for Colorado Supplies. A Memorandum of Understanding to explore the feasibility of these exchanges was signed by the Bureau of Reclamation, the San Diego County Water Authority (SDCWA), the Metropolitan Water District of Southern California (MWD), the Southern Nevada Water Authority, the Arizona Department of Water Resources, the Central Arizona Project, and the Salt River Project.



Claude “Bud” Lewis Carlsbad Desalination Plant, San Diego County Water Authority

This proposal would not affect existing water rights to the Colorado River. It will instead, attempt to establish a process where the entities desiring additional water supply would agree to pay the agencies in California having rights to Colorado River Water to forgo a portion of their Colorado River allocation. They would then use desalinated or recycled water and reduce their draw upon the Colorado River. The goal is to allow agencies such as the San Diego County Water Authority which has an underutilized desalination plant to get paid for their cost to fully utilize that supply. Users in Arizona would then access an amount of Colorado River water that San Diego does not take. This exchange process would eliminate the need to build additional transmission infrastructure.

While this sounds simple and logical, there are many details that would need to be worked through. For example, San Diego does not have assigned water rights to Colorado River water which belong to MWD. Likewise, MWD owns the Colorado River Aqueduct and would have to be appropriately compensated for their unused Aqueduct capacity. This example shows the agreements will have complexity.

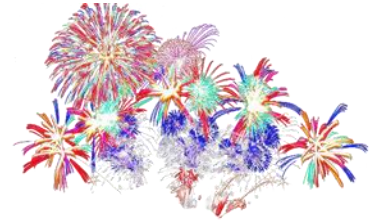
However, this could be a win/win proposition if the parties can work out the details.

# Mystery History Questions

Presented by Jack Feldman 

Built by Gravity. Delivered by Determination.

These two photographs capture a remarkable chapter in construction of one of the most consequential infrastructure projects in Los Angeles history.



Look closely. The details may reveal more than you think.



Image 1 Automobile inside steel siphon pipe

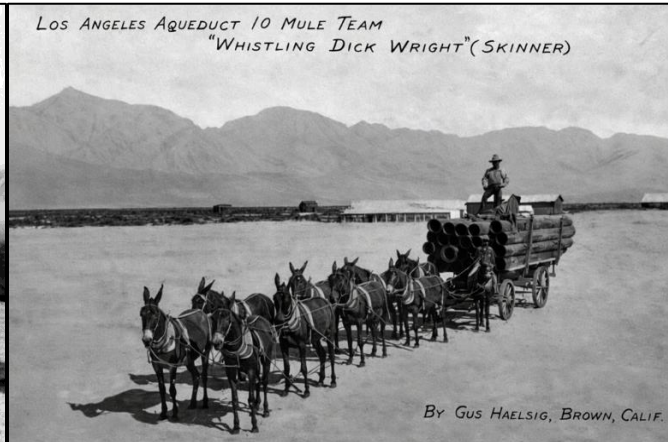


Image 2 Whistling Dick Wright and mule team

1. The automobile in the first photograph was likely included to:
  - A) Demonstrate a construction vehicle
  - B) Transport workers
  - C) Show the enormous scale of the steel siphon pipe
  - D) Test the completed aqueduct
2. The giant steel pipe sections were required primarily to:
  - A) Store emergency water
  - B) Carry water across deep valleys under pressure
  - C) Generate hydroelectric power
  - D) Divert flood flows
3. Why did construction crews rely on unusually large mule teams for portions of aqueduct construction?
  - A) Caterpillar tractors were tested but proved unreliable in desert heat and sand
  - B) Rail transport ended short of the siphon crossing and no suitable road existed
  - C) State regulations prohibited use of steam-powered equipment near the aqueduct route
  - D) The pipe sections exceeded the load limits of wagons designed for motorized hauling

4. Dick Wright, known as “Whistling Dick,” became notable because he:

- A) Designed the siphon system
- B) Managed one of the aqueduct’s most difficult hauling operations
- C) Served as chief engineer
- D) Established construction camps

5. Approximately how old was Wright while performing this work?

- A) 48
- B) 58
- C) 64
- D) 74

6. What larger challenge do these photographs illustrate?

- A) Designing dams
- B) Moving massive materials across remote terrain before modern heavy equipment
- C) Building treatment plants
- D) Managing urban growth

7. More than a century later, what best describes the role of the Los Angeles Aqueduct in Los Angeles’ water system?

- A) It supplies nearly all of Los Angeles’ water
- B) It remains a foundational, locally controlled source that typically supplies 30 to 40 percent of Los Angeles’ water as part of a diversified portfolio
- C) It operates primarily as an emergency backup system
- D) It has largely been replaced by recycled water

 Mystery History Bonus Question

The aqueduct required hundreds of miles of conveyance, numerous tunnels, siphons, camps, rail spurs, power facilities, and thousands of workers.

Which aspect of the project do you believe represented the greatest engineering challenge and why?

 Think you got them all right?

Answers to Questions 1-7 can be found on Page 21. Answers to the Bonus Question and Questions 1-7, along with the full story of the Los Angeles Aqueduct can be found at:

[https://waterandpower.org/museum/Construction\\_of\\_the\\_LA\\_Aqueduct.html](https://waterandpower.org/museum/Construction_of_the_LA_Aqueduct.html)

# GUEST SPEAKERS

Summaries by Robert Yoshimura

GUEST OF THE MONTH  
APRIL 2026

**George Nino, Acting Director of Power New Business and Electrification (PNBE)  
Los Angeles Department of Water & Power**

## **POWERING YOUR BUSINESS - DWP'S PROCESSES FOR NEW ELECTRICAL CONNECTIONS**

George Nino was invited to speak to the Water & Power Associates to tell us about changes in the Power New Business process resulting from the significant increase in demand from customers for new and upgraded electrical service connections. Concurrently, the Department has refocused its interest in customer relationships and making the customer's experience better when dealing with service requests.

Over the past several years, PNBE's work volume has increased fivefold and its timeframes for completing work and its ease of communication with the public have become the subject of some criticism. Consequently, DWP created a new stand-alone Division by removing PNBE from the Power Engineering Division and adding additional service groups to deal with the added workload.

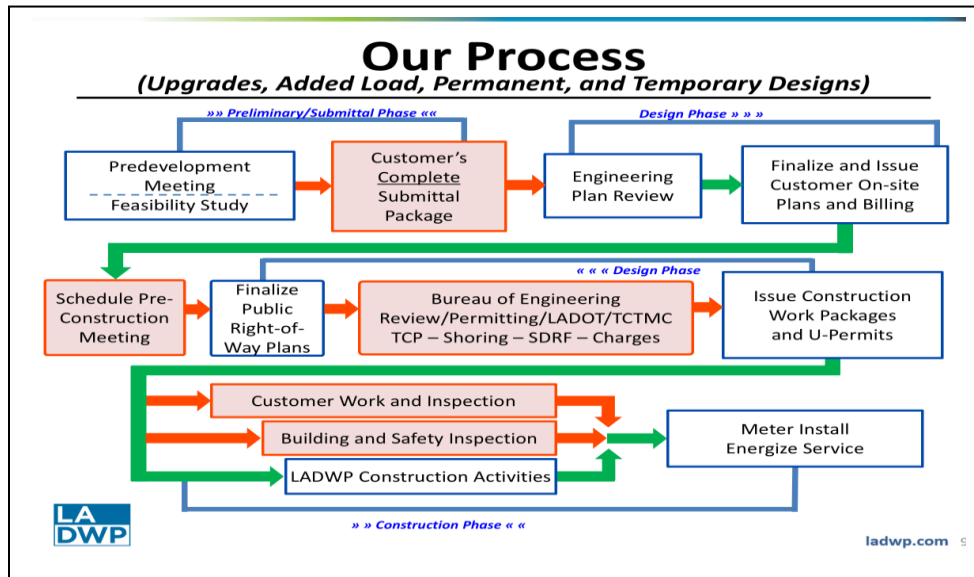
The PNBE deals with a large and growing variety of project types, including Industrial, Commercial, Mixed Use, Residential, Net Energy Metering and Feed-in-Tariffs, Cell Sites, EV Charging Stations, Street Lighting, Outdoor Lighting, and Upgrades for existing customers. While PNBE is a customer-facing organization, their role is primarily technical. They provide the engineering necessary for both the work on the customer's property and DWP infrastructure needed to create solutions for each project. What PNBE does is:

- Design and construct new electric services
- Design and construct offsite LADWP infrastructure
- Provide customer commitment documents
- Inspect and approve customer installations
- Ensure customer installations are safe and reliable
- Manage projects and provide guidance

Projects are divided into three phases: the Preliminary/Submittal Phase, the Design Phase, and the Construction Phase. Thorough communication occurs between PNBE and the customer within each phase to assure that deliverables are provided accurately and in a timely fashion. The complete process is depicted in the diagram below. Note that coordination, input, and



permitting from the Los Angeles Department of Public Works Bureau of Engineering is a mandatory part of larger projects. To expedite this process, DWP is funding some positions within the Bureau of Engineering to provide specific services needed by them.



Electrification and renewable energy projects such as solar, net metering, and purchases of electricity from private vendors through the feed-in-tariff process accounts for a significant part of the increase in demand for PNBE services. The creation of the

PNBE Division in response to the increased demand has resulted in a large organization currently consisting of about 300 employees. In order to maximize the efficiency of the Division, the DWP's new Director of Corporate Performance, Continuous Improvement, and Change Management has introduced the concept of Kaizen. Kaizen is a Japanese business philosophy directed at continuous improvement of a company's business processes by using its managers and internal experts to look at itself and study its processes and procedures to identify how to make improvements.

A Kaizen Event for PNBE was initiated in January 2025 when a panel of supervisors and managers interviewed 35 internal subject matter experts with the goal of finding opportunities for improvement (OFIs). The panel identified 974 such OFIs which were ultimately culled down to 19 Situation Target Proposals (STPs). The 19 STPs are the key processes needing improvement. Many of them focus on improving communication with customers regarding things like project status; customer and contractor education; and online project administration including submittals, supply voltage determination, contractor certification, invoicing, payment, and electronic signatures. These STPs are currently under evaluation by three or four employees closest to the each of the 19 issues who are charged with recommending appropriate changes for each one.

Even before Kaizen's onset, changes to some processes were made to improve customer experience in such areas as status inquiries in which finding the right person to talk to was difficult. PNBE has created an online portal from which a list of contact persons (and their supervisors) is given for each current project in the pipeline. Additionally, a minimum of 8 project status updates at certain milestones are automatically emailed to each customer. Furthermore, the PNBE has begun the process of implementation of a concierge approach to customer inquiries. They have hired nine new employees known as Utility Service Specialists (USSs) who are being trained to interact with the internal chain of workers responsible for each step of the new business process. They will thus become a single point of contact for customers awaiting a new service connection.

Another interesting process improvement occurred in September 2023 when the policy for line extensions was changed. Prior to the change, the customer was required to pay for 100% of the cost of any new infrastructure needed to bring power to the customer from the nearest DWP power source. Since the change, customer-initiated projects share the cost of conduits and underground line extensions.

This change and the STPs under consideration reflect the change in thinking at DWP that will make the customer experience better. Process improvement is now an integral part of DWP's operation that will continue to evolve the company in the future.



GUESTS OF THE MONTH  
MAY 2026

**Gregory S. Huynh, Intermountain Power Project (IPP) Operating Agent**  
**Wing Wong, Project Manager, Los Angeles Department of Water & Power**

**UPDATE ON IPP RENEWED**



The Intermountain Power Project, completed in 1986, was originally an 1,800 MW coal-fired facility in Delta, Utah, built to provide reliable, low-cost power to rural Utah communities and Southern California.

IPP Renewed is an ongoing effort to convert the site into a renewable energy hub. In late 2025, coal operations ended and were replaced by two combined-cycle natural gas turbines with a total generating capacity of 840 MW. The gas

turbines are capable of initially burning 30% hydrogen for fuel and will ultimately ramp up to 100% as the technology develops. The IPP plans to begin using hydrogen in August of this year. Two interconnections have been incorporated to accept a total of 369 MW of local wind-generated energy. The new gas turbines will provide dispatchable energy for reliability and to support HVDC transmission. They will also integrate with and attenuate the variability of renewable resources.

IPP also includes the Northern Transmission System (NTS) that delivers power to the Utah/Nevada communities and cooperatives, and the Southern Transmission System (STS), a direct current line that can bring up to 2,400 MW of power to Southern California. As part of IPP Renewed, the STS is being upgraded by building new converter stations at both Delta Utah and Adelanto California and synchronous condensers at Delta Utah to accommodate the delivery of up to 3,000 MW of renewable energy in the future.

IPP participants include twenty-three Utah municipalities, six power cooperatives in Utah and Nevada, and the six California municipalities of Anaheim, Burbank, Glendale, Los Angeles,

Pasadena, and Riverside. The cities of Anaheim, Pasadena, and Riverside as well as two Utah municipalities will drop out of IPP in 2027.

IPP is part of the Intermountain Power Agency (IPA), an interlocal entity created by the Utah state legislature that owns all IPP assets. IPP consists of all current and future generation and transmission assets and all ancillary facilities. The Intermountain Power Service Corporation (IPSC) is the organization responsible for staffing IPP with Utah employees under the guidance of the Operating Agent. Under an agreement conceived at the outset of IPP, LADWP is the Operating Agent and Project Manager under contract to IPA.

Governance of IPP is the responsibility of the IPA Board of Directors who consider resolutions submitted by the two coordinating committees. The IPP Coordinating Committee (IPCC) deals with issues associated with operation of the current (coal-fueled) project. The Renewal Contract Coordinating Committee (RCCC) deals with issues associated with the construction of IPP Renewed. On both committees, an 80% vote is required to approve resolutions. LADWP's voting shares are 48.617% on the IPCC and 71.442% on the RCCC based on their share of purchased power from the project. LADWP as the Operating Agent and Project Manager submits resolutions to the IPCC and RCCC for their review and approval.

LADWP's responsibilities include:

- Construction Manager – Manages all IPP Construction Projects
- Operating Agent Responsibilities:
  - Approve Payment of Invoices
  - Recommend Operating Budget, Procedures and Parameters
  - Authority to Purchase Fuel
  - Perform O&M for Transmission, Adelanto Converter Station, Telecommunications, Real Estate, and Environmental Matters
  - Oversees All Other IPP Related Matters

All four major elements of IPP Renewed are nearing completion. Generation facilities are operable and will begin testing with hydrogen in August. The converter stations are under construction and will be completed early in 2028, notwithstanding quality issues and supply problems with some of the required equipment. The switchyard at IPP is complete and the one at Adelanto will be completed early next year. The synchronous condensers are in testing and commissioning and should be operational later this summer.



Remaining challenges on the project include the normal construction closeout problems (e.g. punch list items) and the quality and supply issues at the converter stations. Additionally, political issues have cropped up that require careful handling consisting of conflicts in certain decisions related to blue state vs red state policies. However, a strong relationship between LADWP and Utah and 40 years of a successful partnership are expected to enable both parties to resolve such issues.

**Anselmo Collins, Sr Assistant General Manager & Chief Operating Officer  
Los Angeles Department of Water & Power**

**UPDATE ON WATER ISSUES**

This month's guest speakers included, Anselmo Collins along with three of his staff, Kristine Ly, Steven Kuo and Benjamin Wong.

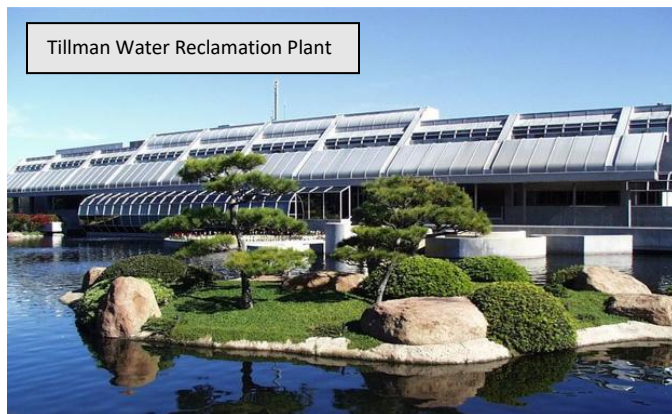
Anselmo, gave a brief overview of four key issues affecting the Los Angeles water supply system:

1. Challenges facing Los Angeles's Mono Basin water supply
2. The Tillman Water Reclamation Project
3. Pure Water LA
4. Automated Metering Infrastructure (AMI)

The Mono Lake Committee is a long-established conservation group focused on protecting Mono Lake. It has negotiated agreements with DWP and secured State Water Resources Control Board (SWRCB) rulings that limit exports from the Mono Basin for domestic use in Los Angeles. Most significant is SWRCB Decision 1631, issued in 1994, which cut the amount of water available for export to Los Angeles from more than 100,000 acre-feet per year to less than 16,000. The decision's purpose is to raise Mono Lake to a sustainable elevation of 6,392 feet above sea level.

Reaching that sustainable level has been difficult, largely because climate change-related drought has affected the eastern Sierra since 2000. Although DWP has fully complied with Decision 1631, the Mono Lake Committee is now seeking legal changes that would reduce Los Angeles's exports from the Mono Basin to zero. Recent studies show that the difference in time needed to reach the target lake level under the current export plan (26 years) versus a zero-export scenario (22 years) is only four years. In that context, the tradeoff between minimal ecological benefits to Mono Lake and the costs of replacement water and the renewable energy generated by that water does not appear reasonable.

The Tillman Water Reclamation Project (WRP) is currently the largest water reuse project under construction in California and will produce at least 25 million gallons per day (MGD) (approximately 28,000 AF/yr). Since the project started, opportunities to expand the capacity to 45 MGD (49,500 AF/yr.) have been found and will be implemented. The added capacity will



Tillman Water Reclamation Plant

require additional infrastructure outside the plant such as upgrades to Balboa Pumping station, a new interceptor sewer to divert sewage that would otherwise be transported to Hyperion, and a means to deliver finished water northward to the perimeter of the San Fernando Valley. The possibility of diverting water from the Los Angeles River is also under consideration, however permitting and coordination issues will first have to be resolved.

The project cost estimate is \$1 billion, of which approximately half has been secured, much of it from outside sources (grants and loans). Construction is 30% complete and progress has been exceptional because of a 24/7 work schedule made possible by the isolated location of the jobsite. The project will include a learning center where the extensive treatment process will be explained emphasizing the safety of the finished water for drinking water purposes.

The initial plan for use of the effluent from Tillman WRP is to put it into the San Fernando Groundwater Basin for extraction at existing and future well fields. Effluent will be pumped to both the Hansen and Tujunga spreading grounds for infiltration underground. During and after major storm events when the Los Angeles County Flood Control District has priority use of the Hansen spreading basins, DWP is planning to construct injection wells to always enable continued delivery of effluent to the groundwater basin.

Groundwater extraction capacity will expand significantly in the near term. The wellhead treatment plant at North Hollywood West has been completed, and the North Hollywood and Tujunga plants are scheduled for completion this year. Once all three plants are finished, total extraction capacity will reach 300 cubic feet per second (cfs), approximately equal to 217,200 AF/yr. Additional facilities are planned to move groundwater west to the future Roscoe Trunkline and north to the upper perimeter, allowing San Fernando groundwater to be used within the San Fernando Valley, which is not currently possible. These facilities will also eliminate MWD's "blind spot," a gap in its pipeline system that prevents water from reaching parts of the west valley when the California Aqueduct is out of service.

A final option is to send Tillman WRP effluent to the Los Angeles Aqueduct Filtration Plant (LAAFP) to supplement raw water supplies. This would not qualify as direct potable reuse as long as reclaimed water makes up less than 10% of the plant's total inflow. From there, the water could be distributed to nearly any part of the city.

Pure Water LA is an ambitious \$26 billion project to recycle up to 230 MGD (approximately 257,000 AF/yr) of reclaimed water from Los Angeles' Hyperion Water Reclamation Plant for domestic uses in Los Angeles.



Effluent from Hyperion WRP will be used for both indirect potable reuse (IPR) by putting it into the Central and West Basins, and to the San Fernando Basin for groundwater recharge, and direct potable reuse (DPR) by pumping it to the LAAFP where it will constitute more than 10% of the plant's influent.

IPR in the Central and West Basins will require extensive study to characterize the water quality of those basins to determine the level of treatment that will be required when it is extracted. DWP is considering a partnership with the Water Replenishment District (WRD) and West Basin Municipal Water District to assist with that characterization. West Basin MWD is currently using Hyperion effluent at its Edward Little WRP for IPR via groundwater injection wells.

The goal of the project is to use most of the water for DPR at the filtration plant. However, the mandated sequence of treatment processes needed to qualify for DPR requires ozonation and biological activated carbon (BAC) treatment to occur as the first steps, followed by filtration, reverse osmosis (RO), and advanced oxidation/ultraviolet irradiation (AOP/UV). Ozonation and BAC are not required for IPR because infiltration or injection into a groundwater basin provides the natural attenuation of contaminants that replace Ozone/BAC. The mandated treatment sequence means that every drop of water produced by the plant will unnecessarily meet DPR

standards. In order to save money, DWP will propose to rearrange the treatment sequence to put Ozone/BAC at the end such that water intended for IPR can easily bypass those processes.

DWP is planning to perform extensive pilot studies using different sequences of treatment processes to prove that its proposal will provide the same efficacy of treatment as the sequence mandated by the state.

Transporting the water to the LAAFP will require the construction of a 30-mile pipeline and three pumping stations along with much tunneling due to the alignment through a densely developed urban area. Such construction comes at high cost, thus optimizing the use of Tillman WRP to produce as much of the reclaimed water as possible will be needed to fine-tune the project.



Automated Metering Infrastructure (AMI) in the Water System is still under study due to complicating factors. The Power System is moving ahead with AMI because power is available at all their meters. The Water System is concerned about battery life which the meter industry claims exceed 20 years. No water utility has had automated meters for 20 years and those who have implemented them are reporting a shorter lifetime. Most automated meters incorporate operating and customer convenience features that tend to shorten battery life depending on their frequency of use.

Southern Nevada Water Authority, which recently implemented AMI, experienced not only short battery life, but multiple batteries that died at the same time. The sudden death of multiple batteries forced the agency to estimate bills while dead batteries were being replaced. The estimated bills resulted in multiple lawsuits. Other water utilities have reported battery lifetimes of 11 years, significantly less than the expected 20 years. Another utility reported having to replace 15% of the meters each year which is triple the replacement rate that DWP has historically experienced. Before launching AMI, DWP is initiating a 6-year pilot study to assess different manufacturers and modes of use to assure that it has the facts it needs to make a responsible decision.

**Kristine Ly - Civil Engineering Associate in Strategic Planning**  
**Steven Kuo - Manager of Resources Development**  
**Benjamin Wong - Supervisor of Strategic Planning**

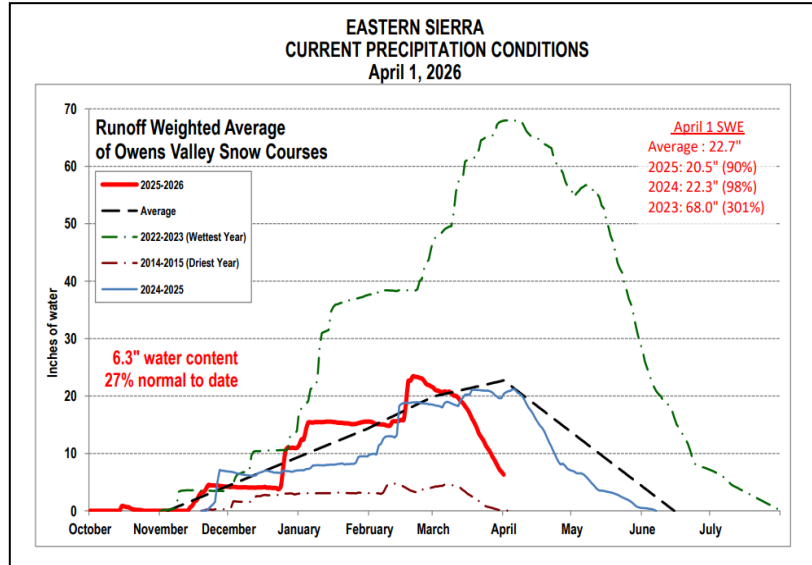
**Los Angeles Department of Water & Power**

## **WATER SUPPLY CONDITIONS & DEMAND TRENDS UPDATE FOR 2026**

Kristine Ly provided a summary of an annual exercise in the Water System known as the Water Supply Symposium where planning and operating staff gather to develop forecasts of water supply and demand conditions for the upcoming year.

### **Supply Update.**

**Eastern Sierra** – The past winter was characterized by several significant storms and an early snowpack peak, which occurred early in March instead of April 1, the historical peak. Despite the early peak and a warm spring that caused rapid melting and runoff, the total export of water to the city is forecasted to be 215,000 acre-feet (AF) which is close to the average.



**State Water Project (SWP)** – The northern Sierra watershed experienced low levels of snow and an early peak. Most of the snow had melted off by April 1, again due to a warm spring, but downstream storage reservoirs such as Oroville and San Luis are nearly full, at 95% and 94% of capacity today. As a result, the state increased its allocation to SWP contractors to 45% (of contracted amount) in May.

**Colorado River** - In the Colorado River Basin, similarly low levels of snow and an early peak followed by rapid melting and early runoff characterize the water supply situation there as well. However, because the basin has been in a long-term drought, water levels in the two downstream reservoirs (Lakes Powell and Mead) continue their long-term decline, with water elevations defining a Tier 1 shortage condition.

**MWD** – MWD’s water supply consists primarily of allocations from the SWP and Colorado River. Thanks to the increased allocation of SWP water to 45%, MWD is now forecasting a total supply of 1.78 million AF which exceeds its demand forecast of 1.53 million AF. Any excess supply accrued over the year will be placed in storage for use in the following years. Total reservoir storage as of the end of 2025 was 3.8 million AF, the highest ever.

**Groundwater** – The San Fernando Basin has produced significantly less water than average over the past few years because of construction of groundwater remediation facilities at three locations in the valley. However, two of those facilities at North Hollywood West and North Hollywood were completed this year. A third facility, the Tujunga Centralized Treatment Plant will be completed in June 2027. Consequently, DWP is forecasting total production of 52,260 AF for the 2026-2027 Runoff year, slightly more than the basin average of 48,354 AF.

Ultimately, when all wells become operable in all three DWP groundwater basins, total production will swell to the range of 90,000 to 130,000 AF/yr.

Reclaimed Water – Reclaimed water production is predicted to increase to 16,220 AF for 2026-2027 from 11,800 AF in 2025-2026. Further rapid increases in deliveries as high as 40,000 AF are anticipated by 2029 due to new customers including Valero, Air Products, and the Dominguez Gap seawater barrier.

### **Demand Update.**

Actual vs. Forecasted – In Runoff year (RY) 2026, which extended from April 2025 through March of 2026, actual demands were less than forecasted except for an uptick at the end of the year in March. Total demand last year was 454,463 AF vs. a forecasted amount of 471,966 AF. The uptick is attributed to unusually high maximum temperatures in March combined with lower precipitation than average.

Declining Per Capita Water Usage – A key factor affecting demand forecasts is the per capita usage of water, which has declined significantly since 1987 when it was 187 gpcd. It reached 133 gpcd in 2014 when the Climate Action Plan was established and dropped further to 106 gpcd in 2017. At the end of the 2026 RY, per capita usage was 102 gpcd and should easily achieve the long-term goal of 100 gpcd set forth in the Climate Action Plan.

Population – Another key factor affecting demand forecasts is population, which reached a peak of nearly 4.1 million people in 2018 and has declined since then. Although it has rebounded somewhat in 2025, it will be assumed to remain constant for the next RY at just less than 3.9 million. This assumption is partly a hedge against the uncertainty expressed by subject matter experts regarding which direction population will go.

2027 RY Demand Forecast – Based on the above information, next year's projected demand is 453,000 AF. Anticipated supplies are more than sufficient to meet that demand as follows:

- Los Angeles Aqueduct; 213,492 AF; 47%
- MWD; 174,322 AF; 38%
- Groundwater: 52,260; 12%
- Recycled; 15,426; 3%





## Mystery History Answers

1. C - Engineers routinely placed automobiles, horses, and workers beside or inside completed pipe sections specifically to convey the structure's scale to the public. The pipe measured up to 10 feet in diameter, large enough to drive a car through comfortably, and photographs like this one circulated widely in newspapers, postcards, and engineering journals at the time.

2. B - The aqueduct's 23 steel siphons carried water down one side of a canyon and up the other using hydraulic pressure, requiring no pumps anywhere along the 233 mile route. The deepest sections at Jawbone Canyon reached 368 pounds per square inch, necessitating steel plate more than one inch thick at the sag pipes.

3. B - Historical Note:

Although caterpillar tractors were tested during portions of aqueduct construction and proved ineffective under some desert conditions, the specific reason unusually large mule teams were used for the Jawbone haul was that rail transport ended short of the siphon crossing and no suitable road existed across the remaining terrain. Mule teams completed the final haul because no practical mechanical alternative existed.

4. B - Wright managed a 52 mule team hauling 30 ton pipe sections four miles across open Mojave Desert to the Jawbone Siphon, one of the most demanding hauling operations on the entire project. He was reportedly hired

after telling division engineer Harvey Van Norman that he could handle as many mules as he could see. His presumed grave lies in a small windswept cemetery about one mile southwest of Jawbone Canyon Road, between the routes of the original and Second Los Angeles Aqueducts.

5. D - Wright was approximately 74 years old at the time of the Jawbone haul, making him one of the oldest workers on the entire project. The postcard in Image 2 identifies him as "Whistling Dick Wright (Skinner) 76 Years Old," a slight variation likely reflecting a different point in his service on the project.

6. B - Together the two photographs illustrate the central logistical challenge of the siphon sections: moving pipe too large for any road and too heavy for any machine then available across miles of remote desert terrain before cranes, heavy haul trucks, or GPS existed. The car in Image 1 conveys the scale of what had to be moved; the mule team in Image 2 shows how it was done.

7. B - As of 2026, LADWP's Director of Water Operations describes the aqueduct as "a foundational pillar of our water system" that "will remain indispensable in the years ahead." Together the original (1913) and Second Los Angeles Aqueduct (1970) typically supply 30 to 40 percent of Los Angeles' water through gravity conveyance at minimal energy cost, making Eastern Sierra water one of the city's most valuable locally controlled water resources.


For Bonus Question Answer, see the Associates website linked on Page 11

# SAVE THE DATE

2026 CALENDAR

## GUEST OF THE MONTH

Meetings in Person  
Room 1471, JFB and Via  
Zoom, Check your WPA  
Emails for the Zoom Link



FIELD TRIP Port of Los Angeles	JULY 15, 2026
ARASH SAIDI Exec Mgr Power System Plng LADWP	AUGUST 12, 2026 LA100 Update
SCOTT MELLON General Manager Glendale Water & Power	SEPTEMBER 9, 2026 Grayson Power Plant Repower
SPEAKER TBD	OCTOBER 14, 2026 Water Subject

## BECOMING A MEMBER

Join

- + HELP PRESERVE LOS ANGELES REGIONAL HISTORY OF WATER AND ELECTRICITY
- + DISSEMINATE KNOWLEDGE OF THE RICH MULTI-CULTURAL HISTORY OF LOS ANGELES
- + BECOME INFORMED AND GAIN INSIGHT AND EXPERTISE ON WATER AND ELECTRIC ISSUES

### ANNUAL MEMBERSHIP \$30

ONLINE AT WATERANDPOWER.ORG  
BY MAIL, FILL OUT THIS CARD AND WRITE A CHECK TO:  
WATER & POWER ASSOCIATES, INC  
SEND BOTH TO:  
10736 JEFFERSON BLVD, UNIT 165  
CULVER CITY, CA 90230

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_  
\_\_\_\_\_

PHONE \_\_\_\_\_

EMAIL \_\_\_\_\_

COMPANY, TITLE/POSITION, RETIRED \_\_\_\_\_

Check if you would like to receive a digital copy of the newsletter only, to save mailing costs.

+ Water & Power Associates, Inc, is an IRC 501 (c) (4) organization. Donations are not tax deductible.