



JULY 2024



WATER & POWER ASSOCIATES, INC.

NEWSLETTER

For a Sustainable Los Angeles



Delta Conveyance Project Update Additional Hurdles Arise from Environmental Concerns

By Robert Yoshimura

The single-tunnel Delta Conveyance Project (DCP) was finally approved in December 2023 after more than 60 years of discussion. The California Department of Water Resources (DWR) certified the final Environmental Impact Report (EIR) which should have cleared the path for design and construction. However, as we reported in the April issue of this newsletter, the project encountered numerous roadblocks including nine lawsuits challenging the adequacy of the EIR, funding issues, and objections from a variety of stakeholders.



From California Department of Water Resources

Since then, DWR has proceeded with geotechnical exploration of the tunnel alignment and the installation of monitoring wells to provide data to be used in design. Early in May, the County of Sacramento and the Sacramento County Water Agency jointly filed a motion for a preliminary injunction against the DWR to stop such exploratory activities. The petitioners argue that such activities violate the Delta Reform Act of 2009. They claim the act requires DWR to file a Certification of Consistency with the Delta Stewardship Council prior to initiating implementation of the DCP. Such certification would prove that the DCP is consistent with the Delta Plan. Once filed, anyone may appeal such certification with the Council, which automatically stays implementation of the project until the appeal is resolved.

Because DWR has not filed such a certification, the petitioners contend that the ability of the public to appeal DWR's actions has been unlawfully usurped. DWR, on the other hand contends that such geotechnical information-gathering is part of the design of the project and not part of implementation. Nine similar motions have subsequently been filed by the petitioners of the nine original lawsuits against the EIR mentioned above. The motions for a preliminary injunction were heard in Sacramento County Superior Court on May 31, 2024. On June 6, 2024, the Sacramento County Superior Court granted that injunction.

As a next step in the permitting for the DCP, DWR filed a petition with the State Water Resources Control Board (SWRCB) for approval of a change in the point of diversion associated with the DCP. The new intakes for the project will be located approximately 40 miles to the north of the existing intake at the south end of the Delta. After that filing, a coalition of ten organizations including tribes, non-profit organizations, environmental groups, and commercial fishing advocates filed a protest with the State Water Resources Control Board (SWRCB) asking them to deny the petition based on irreparable harm to the environment and the cultural

(Continued on page 2)



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resources of tribes and other residents. They further argue that the petition is effectively a new water rights application because DWR's permit to divert the water granted in 1972 has expired and that water rights are already over allocated. Thus, SWRCB's action in this case potentially threatens the water rights of Delta farmers and the unadjudicated water rights of certain tribes.

With regard to DWR's water rights for the DCP, another coalition consisting of the Central Delta Water Agency, California Water Impact Network, California Sportfishing Protection Alliance, and Aqualia Alliance has filed a lawsuit against the SWRCB alleging preferential treatment for DWR whose outdated water rights for the DCP, granted by permit in 1955 and 1972 have expired. Such expired permits would ordinarily be cancelled by SWRCB for any other permittee. In DWR's case, it has not met the water development timelines specified in the permits. Those permits required development of the infrastructure and use of the water by 1990, and 2009 respectively. Consequently, the coalition argues that DWR's water rights should be cancelled and reevaluated based on water availability changes since their last permit was issued in 1972. In the more than 50 years that have elapsed since then, the population of California has nearly doubled, and competing uses of the Delta water have been established. Furthermore, the coalition argues that the water rights evaluation and permitting process should be completed before DWR's petition for a change in point of diversion is addressed.

In late May, DWR issued a new report on the cost of the DCP based on a benefit/cost analysis performed by the Berkeley Research Group, a global consulting firm specializing in the investigation of economic disputes among other services. According to the report, the new cost of the DCP is \$20 billion, which is \$4 billion greater than the last estimate made in 2020. The benefits of the project are estimated to be worth \$38.8 billion, nearly double the cost of implementation. Water from the DCP when built will cost \$1,325/acre-foot (AF), which is below the cost of all alternatives including seawater desalination, wastewater recycling, stormwater capture, or conservation.

Upon release of the report, Governor Gavin Newsom proclaimed that the DCP is California's number one climate resilience strategy and is needed to assure water supplies for the state in the face of uncertain climate swings that are anticipated in the future. Had the DCP been in service this year, 909,000 AF of additional water would have been captured and stored in southern California. That's enough water for 9.5 million people for one year. Also, in this earthquake-prone state, the DCP will assure continued delivery of water to users if a seismic event damages the levees that protect the Delta islands from inundation.

Studies such as the DWR report on the cost of the DCP continue to reaffirm the economic feasibility of the project. The need for the project was established more than 60 years ago and a growing population and changing climate have made that need critical. For that reason, we continue to support the project and encourage all Californians to do the same.

President's Column

Congratulations to Marty Adams on his retirement and we thank him for his leadership of the Department and wish him well as he commutes between California and Texas to participate in his grandchildren's lives. We are looking forward to his future participation in the Associates.



We welcome the new General Manager of LADWP, Janisse Quinones, and look forward to working with her on issues of importance to Los Angeles and the Department. She comes with extensive operating experience and has previously worked for both San Diego Gas and Electric and Pacific Gas and Electric. This gives her a solid knowledge of California Energy Issues. She also played a major role in directing the rebuilding of the electrical system in Puerto Rico following Hurricane Maria in 2017.

The Department is putting significant effort into refining the work that was done in the prior Strategic Long Term Resource Plan. The Water & Power Associates have three board members working with the Advisory Group for that plan. Get familiar with the issues that are being addressed and the schedule for completion of this iteration of the plan by reading about it on page 7.

With regard to water supply, the Delta Conveyance Project continues to encounter significant environmental and legal hurdles. Read about them in our lead article on page 1. While the costs continue to rise, the water supply benefit to California is calculated to be twice the cost of implementation. The completion of the project will assure continued supply of water to Southern California if a seismic event damages the levees that protect the Delta Islands from inundation.

The Sites Reservoir Project that will increase California's water supply by an estimated 240,000 acre-feet per year, passed a major hurdle. The Yolo County Superior Court ruled that the Environmental Impact Report for the Project was adequate to meet the requirements of the California Environmental Quality Act. This decision was reached in 150 days, following the filing of the lawsuit, in stark contrast with the 3-5 years of litigation that is usually encountered in environmental lawsuits. (See page 14 for further information).

Included in this issue on page 12 is the letter that the Associates provided to the Energy and Environment Committee of the Los Angeles City Council. This letter discusses the recent action of the Board of the Metropolitan Water District of Southern California to double their property taxes. This action is of questionable legality and will negatively affect the residents of Los Angeles if unchallenged.

Also, I hope you enjoy the many other articles dealing with water and electrical supply advances contained within this newsletter. There is also a summary of the discussion with Commissioner Nurit Katz of the LADWP Board at our June meeting.

Finally, don't miss this edition's Mystery History Question and see if you can answer it correctly.

Enjoy

Jerry Gewe, President

Electric Vehicle Infrastructure Update

By William Glauz

The Biden-Harris Administration opened applications on May 30 for a historic \$1.3 billion funding opportunity for electric vehicle (EV) charging and alternative-fueling infrastructure in urban and rural communities and along designated highways, interstates, and major roadways. This is the largest single grant funding opportunity for EV charging in the nation's history and it will accelerate public and private investment in clean transportation.

The previous round of Charging and Fueling Infrastructure funding, released in January 2024, benefited 47 projects in 22 states and Puerto Rico, supporting construction of approximately 7,500 EV charging ports. Still, the Federal Highway Administration received applications for six times the amount of funding available.

At its April business meeting, the California Energy Commission approved \$771 million to support implementation of the Clean Transportation Program. The bulk of the dollars will go to support incentives for zero-emission truck and bus charging and refueling projects.

California is also expected to receive more than \$380 million from President Biden's Infrastructure Investment and Jobs Act. The funding will help create 6,600 miles of EV corridors, with at least four fast chargers every 50 miles.



Projects are coming online across the state including:

- The first fast charger in Calexico as part of a 10,000 fast charger network statewide;
- The nation's first solar-powered EV truck stop in Bakersfield;
- The world's largest Amazon EV truck fleet on Los Angeles roads;
- State-of-the-art electric truck charging stations in Compton;
- The world's first commercial hydrogen truck stop in Oakland;
- Fifteen electric truck chargers online in Gilroy
- Electric trucks and charging depot unveiled in Ontario
- The first Class 8 heavy-duty electric freight truck crosses U.S.-Mexico border

New Power Technologies to Meet Clean Energy Goals

By William Glauz

The industry consensus is that we are going to need new technologies to meet ambitious clean energy goals. Below is a brief summary of three technologies that are being developed to help the electric utility industry move toward 100 percent clean power.

Green Hydrogen Production

Plug Power Inc., a global leader in comprehensive hydrogen solutions for the green hydrogen economy, received a conditional commitment for a loan guarantee of up to \$1.66 billion from the U.S. Department of Energy's Loan Programs Office to finance the development, construction, and ownership of up to six green hydrogen production facilities.

The production facilities, which will be selected for financing, will be built across the nation and supply major companies, including Plug's existing customers, with low-carbon, made-in-America green hydrogen. The hydrogen generated will be used in applications in the material handling, transportation, and industrial sectors.

Plug, the leading commercial-scale manufacturer of electrolyzers (devices that convert water into hydrogen), currently operates the largest proton exchange membrane electrolyzer system in the United States at its Woodbine, GA, hydrogen plant. Electrolyzers are a key technology for



converting renewable energy into hydrogen. Plug's current green hydrogen generation network now has a liquid hydrogen production capacity of approximately 25 tons per day.

Plug's green hydrogen production plants utilize the company's own electrolyzer stacks manufactured at its state-of-the-art gigafactory in Rochester, NY, and Plug's liquefaction and hydrogen storage systems engineered at its facility in Houston.

Concrete Thermal Energy Storage

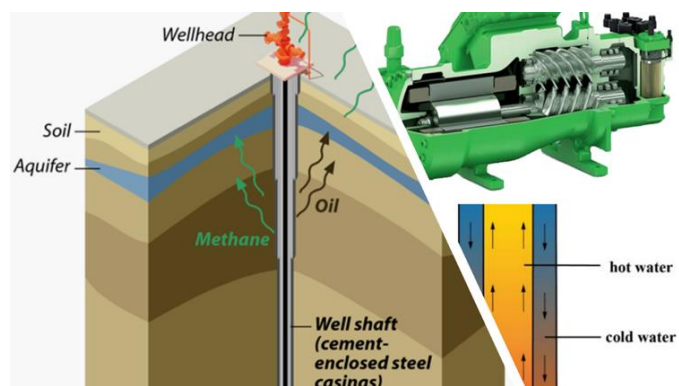
The Electric Power Research Institute (EPRI), in collaboration with Southern Company and Storworks, has recently completed testing of a pilot concrete thermal energy storage system at Alabama Power's Ernest C. Gaston Electric Generating plant (Gaston) marking the largest such pilot in the world. The technology was developed by Storworks.

The 10 megawatt-hour (MWH)-electric energy storage solution is charged by using heat from supercritical steam generated by Gaston's Unit 5. As designed, high-pressure steam from the power plant flows through tubes, heating the concrete, which stores the thermal energy until it is returned to the power plant by converting water into steam to generate electricity in response to grid demand. The project received funding from the U.S. Department of Energy.

The technology can be applied to existing or new thermal power plants, including coal, natural gas, nuclear, or concentrating solar power. The core technology can go beyond electric power to applications including decarbonizing industrial heat.

Borehole Battery

California's electricity grid heavily relies on solar and wind energy, posing challenges in balancing supply and demand due to their intermittent nature. The state's ambitious renewable energy goals sometimes result in surplus solar and wind power, particularly during certain times of the day or year. The demand for dispatchable long-duration energy storage could potentially reach up to 52 gigawatts (GW) by 2045, if California's plan to retire gas generation is successful.



Among technologies to provide long-term energy storage, thermal energy storage has emerged as a key competitive option offering lower lifecycle costs, better safety, easier maintenance, and less dependence on critical raw materials. Lithium-ion batteries currently supply more than 90

percent of the world's battery energy storage but provide only short-duration (eight-hour) capacity.

For more than a century, fossil fuel companies have drilled oil and gas wells to increase the production, consumption, and export of fossil fuels. These wells are often abandoned once they are no longer profitable, and are sometimes left unplugged or improperly plugged, causing local environmental hazards and contributing to global climate change. There are more than 3 million abandoned oil and gas wells in the U.S. and, according to Reuters, there may be as many as 29 million oil wells abandoned globally. Abandoned and orphaned oil and gas wells pose significant public health problems and threats to the environment.

To repurpose and plug an idle oil well, Geo2Watts has developed a "Borehole Battery" comprised of a concentrating solar power parabolic trough, paired with silicon dioxide, or sand, packed into a borehole to plug and store thermal energy for generating dispatchable electricity from renewable sources. With this concept solar power heats sand in a closed-loop pipe extended into the borehole, storing heat at about 200C. When solar irradiance decreases during cloudy days and at night, the stored heat is released to an Organic Rankine Cycle power plant, operating optimally at 150C. This integrated plugging system for continuous heat storage and extraction can provide both baseload and dispatchable electricity, commanding premium prices.

Within the Los Angeles Basin, researchers identified nearly 30,000 wells that meet the temperature and pressure thresholds for reasonable electric power generation. By repurposing these wells, they can be turned into productive assets, contributing to clean energy production.

Funding for Water Recycling in Southern California

By Jerry Gewe

The Bureau of Reclamation has announced an award of \$99.2 million in funding for the Pure Water Southern California Project, which is being developed by the Metropolitan Water District of Southern California (MWD) and the Los Angeles County Sanitation Districts. The project proposes to treat up to 150 million gallons of water per day from the Carson Wastewater Treatment plant, purify it to drinking water standards, and distribute it through the existing MWD distribution system to boost Southern California's water supply.



Bureau of Reclamation announcement of funding for water reuse projects

The Bureau of Reclamation also awarded \$30 million for the San Fernando Groundwater Recovery Project for treatment facilities at the Donald C. Tillman Treatment plant, which is the first phase of the City of Los Angeles' Operation NEXT Program. Operation NEXT is an innovative water supply project that involves augmenting groundwater replenishment and maximizing purified recycled water from the Hyperion Water Reclamation Plant in Playa del Rey to create a new sustainable water resource for Los Angeles. This project is being developed by the Los Angeles Department Water and Power and the Los Angeles Bureau of Sanitation and Environment.

The funding comes through the Bureau of Reclamation's Large-Scale Water Recycling Program funded through the Bipartisan Infrastructure Law, which provides \$450 million over five years to large water recycling projects in the West.

These projects, which are in the planning and environment review phases, are very large-scale, long-range, multi-billion-dollar water supply enhancement projects which will serve to improve the reliability of water supply for Southern California for the future.

America Exceeds Five Million Solar Installations Nationwide

By William Glauz

The U.S. has officially exceeded five million solar installations, marking a significant achievement in the nation's clean energy transition. This milestone comes just eight years after the U.S. reached one million installations in 2016—a milestone that took 40 years to achieve following the first grid-connected solar installation in 1973.



According to data released by the Solar Energy Industries Association (SEIA) and Wood Mackenzie on May 16, more than half of all U.S. solar installations have come online since the start of 2020. These systems are installed on homes, businesses, and in large ground-mounted arrays across the country.

Despite state policy changes, market trends continue to suggest significant growth in states across the country. SEIA forecasts that solar installations in the U.S. will double to 10 million by 2030 and triple to 15 million by 2034.

The residential sector accounts for 97 percent of all solar installations in the U.S.). This sector has set annual installation records for five consecutive years and 10 of the last 12 years. Residential solar is growing at a historic rate because it is a proven investment for homeowners looking to take control of their energy costs. SEIA says 7 percent of homes in the U.S. have solar today. It predicts this number will grow to more than 15 percent of U.S. homes by 2030.

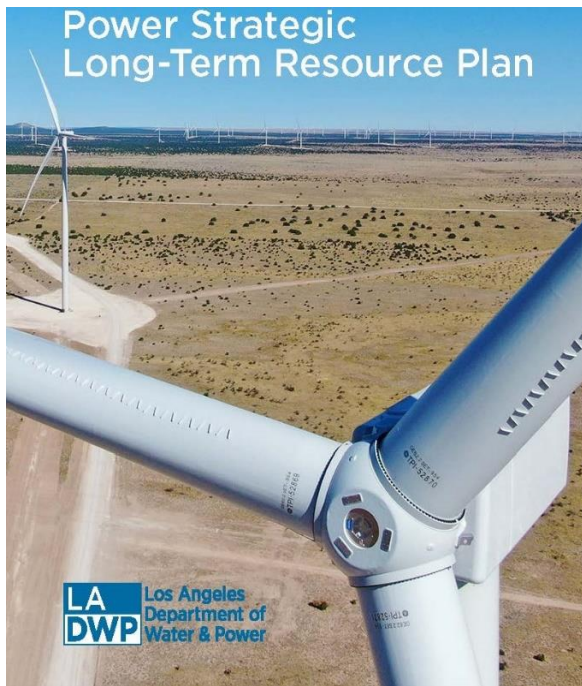
Today, 11 U.S. states and territories have more than 100,000 systems installed. California leads the nation with 2 million solar installations, but recent policy decisions in the state have harmed the rooftop solar market. Several other states are seeing rapid growth. Illinois was an emerging market with only 2,500 solar installations in 2017, and today, the state is home to more than 87,000 solar systems. Florida is another market experiencing substantial growth, increasing from 22,000 installations in 2017 to 235,000 installations today.

2024 LADWP Strategic Long-Term Resource Plan Update

By William Barlak

Meeting 3 of the LADWP Strategic Long Term Resource Plan Advisory Group (AG) took place on the morning of May 16, 2024, at the Power System Wall Street facility. Here are some of the highlights.

LADWP staff updated the AG on Equity Strategy Implementation by sharing with the AG the Equity Review Process, Implementation Timeline, and Next Steps. The review process includes



developing criteria for evaluating equity in Power System programs and projects, determining the equity of existing Power System projects, incorporating equity in the development of Power System projects and programs, and developing steps for achieving equity outcomes with stakeholders' input. Successful implementation includes continuous monitoring of performance metrics, incorporating flexibility, and communicating results with internal and external stakeholders.

The Implementation Timeline is broken up into three phases: criteria development in Q3 of 2024, stakeholder review in Q4 of 2024, and implementation in Q1 of 2025.

The Next Steps include allocating resources to identify relevant stakeholders, continuously engaging external stakeholders to foster a culture of improvement and, updating the LADWP Board of Commissioners every six months.

Next, the LADWP SLTRP team provided a summary of AG feedback from Meeting #2 breakout sessions. In the area of new technologies, LADWP reported that offshore wind is a possible resource to serve LADWP. In the area of Distributed Energy Resources (DER), LADWP reported that DER's are a small component of the overall resource mix, and DER's are factored into system cost modeling. In the area of System Reliability, the team reported that the Power System Reliability Program remains a priority to strengthen the distribution system, and reliability requires Transmission Projects which will require partnerships with the California Independent System Operator. In the area of hydrogen, the team reported that LADWP has no plans to self-produce hydrogen or build hydrogen pipelines and aims to avoid producing hydrogen from potable water.

The main takeaways from the AG breakout sessions include the following. LADWP should emphasize equity and affordability. There was a strong push for non-combustible options. There was concern expressed about the feasibility of implementing current technologies and policies. There was an urgent call for better risk management associated with climate change and energy demand. There was recognition that LADWP workforce needs development to support energy transition.

Finally, Ascend Analytics provided a summary of how the 2024 SLTRP study and modeling will proceed. The study goals include identifying the resources to best match the needs of LADWP, providing insights into future system operations, and creating resource portfolios at the lowest possible cost. The criteria to be evaluated in the study are reliability, sustainability, equity, and affordability.

The simulation tools to be used in the study will be Capacity Expansion that will select resources to meet planning targets, Resource Adequacy will determine the likelihood that the selected resources can reliably serve the projected load, and Production Cost that will simulate system operations to determine operating costs, greenhouse gas emissions, and renewable generation. The simulations require predicting future weather variability, changes in customer load, generation costs, resource costs, and the availability of future resources.

Ascend Analytics proposed using four study scenarios, each of which only assumes expected load growth. These scenarios are:

- SB100 (the current state policy) which assumes 60% renewable portfolio standard by 2030, 90% clean energy by 2035, and 100% clean energy by 2045
- SB 100 Carbon Free which assumes 60% renewable portfolio standard by 2030, 90% clean energy by 2035, and 100% carbon free by 2045
- SB 100 Carbon Free Accelerated which assumes 80% renewable portfolio standard by 2030, 100% clean energy by 2035, and 100% carbon free by 2045 or earlier
- Case 1 Local Policy: Carbon Free Accelerated which assumes 80% renewable portfolio standard by 2030, and 100% carbon free by 2035.

The Ratepayer Advocate suggested price sensitivities be limited to two situations that “bookend” the investigation. One is SB100 current state policy with high prices in Carbon and Gas markets, and low cost of renewables. The second is Case 1 local policy with low prices in Carbon and Gas, and high prices in hydrogen and renewables.

Finally, Ascend Analytics proposed six “what if” sensitivities that will be applied only to the Case 1 scenario which is the scenario most subject to risk: low adoption of DER’s, lower than expected load, higher than expected load, shortfall of resources, impacts of climate change on resources, and volatility of hydrogen supply. A breakout session then took place to discuss scenarios, and the price and “what if” sensitivities.

When asked how Ascend Analytics will model intra-hour generation variability associated with renewable resources like wind and solar, Ascend Analytics stated it will not consider intra-hour variability. Instead, Ascend simply assumes more storage will solve the operational challenge of matching intra-hour generation and load on days where solar and wind are both extremely variable. Ascend also stated that one element of the Inflation Reduction Act is that energy storage facilities no longer have to be built as part of a solar or wind facility to take advantage of the Investment Tax Credit. “Stand Alone” energy storage facilities now qualify for the Credit.

The Challenge of Interconnecting Inverter Based Renewable Energy Resources to the Bulk Power System

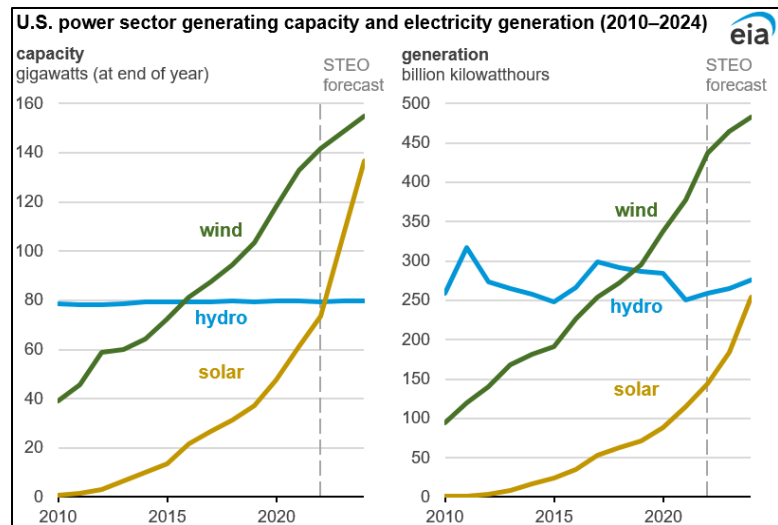
By Saif Mogri

The US Energy Information Administration (EIA) publishes on a regular basis, energy production information for the United States. In 2023, Renewable energy production had grown to 22 percent of electricity generation in the United States, up from less than 1% in 2005. The EIA projects that this percentage will continue to increase over the next few years. The most significant increases in renewable energy generation have recently come from wind, solar photovoltaic, and batteries. These types of electricity resources rely on the use of an inverter to convert the direct current electricity produced by the resource to alternating current for connection to the grid, or bulk power system (BPS). In the United States in 2023, 16% of electricity produced was from these types of renewable resources. . In California, also in 2023, these resources produced 34% of electricity produced, more than double the mix nationwide.

The rapid interconnection of these renewable resources called Inverter Based Resources (IBR), to the BPS is rapidly emerging as one the most significant drivers of grid transformation and poses a high risk to BPS reliability. The speed of this change continues to challenge grid

planners, operators, protection engineers, and many other facets of the electricity sector. But when implemented correctly, inverter technology can provide significant benefits for the BPS.

To maximize the amount of renewable resources, the inverter and plant controls and protection systems must support reliable operation of the BPS during system disturbances. Improper models and study methodologies are two of the factors that can lead to BPS reliability issues.



The North American Electric Reliability Corporation (NERC) issued an alert on June 4 to generation owners and transmission planners concerning IBR resources — like solar, wind, and batteries — that use inverters to connect to the grid. These assets are increasingly the cause of reliability concerns because of their inability to withstand grid disturbances.

NERC discovered that 10 large scale disturbances on the BPS since 2016 caused widespread and unexpected loss of nearly 15,000 MW of IBR, including 10,000 MW in the last four years.

Fortunately, the disturbances have not yet caused widespread blackouts. That’s because IBRs still play a small role in the power system. As renewable resources will rapidly displace fossil fueled synchronous machines, this may lead to widespread failures and blackouts.

NERC is making great efforts to enhance the reliability standards related to IBR risks. The Federal Energy Regulatory Commission has directed NERC to develop new or modified reliability standards to improve the reliability standard for IBR’s connecting to the BPS.

NERC has shared key findings and recommendations with industry stakeholders, working with NERC registered entities as well as directly with inverter and plant controller manufacturers, developers, national laboratories, the U.S. Department of Energy, research institutes, and international colleagues in an effort to enhance the performance of IBRs for existing and newly interconnecting projects. Some of the key mitigating efforts are:

1. Supporting modifications to the generator interconnection procedures and agreements;
2. Driving improvements to interconnection requirements for inverter-based technologies;
3. Addressing model quality issues and inadequate reliability studies during the interconnection process and long-term planning horizons;
4. Focused improvements to commissioning processes;
5. Post-event performance validation and addressing abnormal inverter performance issues;
6. Industry engagement, outreach, education, and collaboration.

US Bureau of Reclamation Proposes Alternatives for Reduction in Colorado River Water Use

By Robert Yoshimura

Following more than 23 years of drought and multiple unsuccessful attempts by the seven Colorado River Basin states at cutting water use from the river to a sustainable level, the Federal government has finally intervened to help resolve the problem. In April 2024, the Bureau of Reclamation issued a proposal consisting of two alternatives allocating cutbacks in water use among the three Lower Basin states that use Colorado River Water as well as a “no action” alternative.



From the Las Vegas Review Journal

Water from the Colorado River is distributed to the Lower Basin states of California, Arizona, and Nevada from Lake Mead. The water level in Lake Mead

peaked at 1,225 ft. elevation above mean sea level (MSL) in 1983. It remained nearly that high at 1,215 MSL as recently as 1999. Since then, it has dropped steadily to a low of 1,040 MSL in July of 2022, just above the level that would have triggered cutbacks to California under then-existing agreements. At that time, Camille Touton, the Commissioner of the Bureau of Reclamation called for a two-to-four-million-acre-foot reduction in water use from all the basin states. She further threatened to impose unilaterally developed cutbacks upon the Lower Basin states if they could not voluntarily develop a suitable plan.

Because the Bureau of Reclamation is the Watermaster for Lower Basin, they have legal standing to intervene. Each Upper Basin state acts as its own Watermaster and is independent of the Bureau regarding water rights issues.

The Bureau’s proposed alternatives include one that respects the historical seniority of water rights and allocates the cutbacks accordingly, which would affect the cities of Arizona and Nevada while sparing significant cutbacks to Imperial Valley. The second alternative overrides those water rights and allocates the cutbacks based on a fixed percentage of each state’s water. The second alternative would result in the greatest share of cuts being borne by California and would severely affect the farmers of the Imperial Valley. The Imperial Irrigation District supports the first option, while the General Manager of the Metropolitan Water District has publicly opposed both options and vowed to continue working with Lower Basin stakeholders to find a better solution.

A Draft Environmental Impact Statement on the Bureau’s report is now in circulation. Following a comment period and a public hearing, the Bureau plans to make a final decision in August of this year.

Letter and Presentation Made to Los Angeles City Council, Energy and Environment Committee by Jerry Gewe, June 14, 2024

Water and Power Associates, Inc.

Los Angeles City Council
Energy and Environment Committee

MWD Proposal to Increase Property Taxes to Fund New Water Supply Facilities is Unfair to Los Angeles and May Be Illegal

“On 04/09/2024, the MWD Board voted to double their portion of property taxes throughout their service area with little public notification. Without intervention, this property tax assessment could continue to grow to cover billions of dollars in future MWD expenses with no voter approval.” This would give the Metropolitan Water District (MWD) the opportunity to use property tax financing to cover the costs of major water supply projects such as their Pure Water Southern California and the Delta Conveyance projects, amounting to many billions of dollars. This approach would allow them to keep their water rates low.

Affordability Concerns for Los Angeles Residents

The key issue is affordability for Los Angeles residents. Funding these projects through property taxes would lead to significant tax increases for underprivileged residents, who make up a substantial portion of the LA population. These residents would have no control over the increased property taxes. Conversely, funding through water rates would incentivize and enable residents to lower their bills through conservation measures, thus reducing their water usage and expenses.

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At a minimum, MWD should be required to undertake an aggressive public outreach program to inform the general public about the need for the tax increase. Relying on input from a single board meeting, which most of the public were unaware of, does not constitute satisfactory outreach. This decision should be made through a ballot measure, allowing the public to decide whether to authorize MWD to use tax revenue for their water supply development program.

Impact on Los Angeles Water Purchases and Taxes

Over the last decade, the portion of water purchased by Los Angeles from MWD has been approximately equal to the 20% of the MWD taxes paid by LA residents (**See Attachment**). However, these purchases will decrease significantly in the near future due to LA's investments in groundwater treatment facilities, which will restore or increase groundwater supply from the San Fernando Valley. Additional supply will come from investments in capturing stormwater in the San Fernando Basin. A large part of these investments have been funded by the citizens of Los Angeles through their water rates. Consequently, under the MWD proposal, LA residents would pay higher taxes than their proportionate share of water usage. As a historical note, in the early years of MWD's existence Los Angeles taxes that were much higher than its proportional water use made possible the current MWD supply system, which is benefitting all of Southern California.

Future Water Supply Projections

The Los Angeles Department of Water and Power (LADWP) looks to secure an additional 60,000 to 70,000 acre-feet annually through new groundwater treatment facilities nearing completion. Substantial additional water supply will also come from stormwater recovery projects currently in development and more supply anticipated from the development of Operation Next.

Legal Considerations

The City should seek an opinion from the City Attorney regarding the legality of MWD’s action, which appears to contradict the restrictions on the use of tax revenue specified in Section 124.5 of the MWD Act. (See Attachment)

Sincerely,

Gerald A. Gewe, President
Water & Power Associates, Inc.

ATTACHMENT

City of Los Angeles purchases of water from MWD

YEAR	Acre Feet
2014	441,989
2015	355,459
2016	332,918
2017	216,799
2018	182,794
2019	137,727
2020	152,578
2021	316,647
2022	366,718
2023	219,539
Average Purchase by Los Angeles	273,317 Acre Feet
Percent of MWD Sales	19.97 %
Los Angeles Percent of MWD Assessed Valuation	20.76 %

Sec. 124.5. [Ad valorem Tax Limitation]

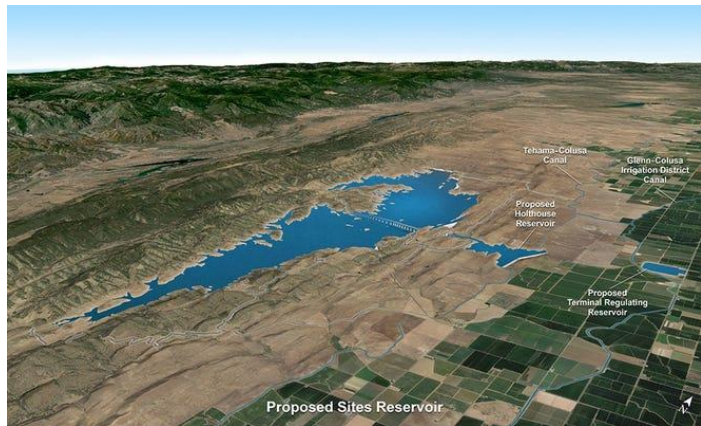
Subject only to the exception in this section and notwithstanding any other provision of law, commencing with the 1990-91 fiscal year any ad valorem property tax levied by a district on taxable property in the district, other than special taxes levied and collected pursuant to annexation proceedings pursuant to Articles 1 (commencing with Section 350), 2 (commencing with Section 360), 3 (commencing with Section 370), and 6 (commencing with Section 405) of Chapter 1 of Part 7, shall not exceed the composite amount required to pay (1) the principal and interest on general obligation bonded indebtedness of the district and (2) that portion of the district's payment obligation under a water service contract with the state which is reasonably allocable, as determined by the district, to the payment by the state of principal and interest on bonds issued pursuant to the California Water Resources Development Bond Act as of the effective date of this section and used to finance construction of facilities for the benefit of the district. The restrictions contained in this section do not apply if the board of directors of the district, following a hearing held to consider that issue, finds that a tax in excess of these restrictions is essential to the fiscal integrity of the district, and written notice of the hearing is filed with the offices of the Speaker of the Assembly and the President pro Tempore of the Senate at least 10 days prior to that date of the hearing.

Added by Stats. 1984, ch. 271.

Sites Reservoir Clears Environmental Challenge

By Robert Yoshimura

In the October 2023 issue of this newsletter, we reported on a study by environmental groups opposed to the Sites Reservoir project. The study, conducted by Friends of the River (FOR) and Tell the Dam Truth (TTDT) was based on a model that considered the long-term environmental consequences of the reservoir over a one-hundred-year time span. It concluded that the reservoir would produce an alarming amount of methane emissions totaling 36.2 million metric tons of carbon dioxide equivalent in its lifetime, equivalent to 80,000 additional gasoline-fueled cars.



A report detailing the study was submitted to the California Department of Water Resources (DWR) with a request to consider the findings in any decisions related to permitting or funding of the reservoir.

Our analysis of the FOR/TTDT study found numerous apparent errors and omissions that detract from the credibility of the study. DWR and the Sites Reservoir Authority apparently felt the same way because they certified the Final Environmental Impact Report /Environmental Impact Statement (FEIR/EIS) on November 17, 2023. Subsequently, Friends of the River teamed with other environmental organizations including the Center for Biological Diversity, California Sportfishing Protection Alliance, California Water Impact Network, Save California Salmon, and the Sierra Club, who jointly filed a lawsuit against the project on December 20, 2023.

The lawsuit argues that the FEIR/EIS failed to consider alternatives to the proposed project, that it violates the California Environmental Quality Act (CEQA) by using outdated and unreliable baseline information regarding habitats and species, and that the project is a major emitter of greenhouse gases (per the FOR/TTDT study). The Yolo County Superior Court's ruling in late May 2024 found the alternatives consideration and environmental analysis of the project to be adequate under CEQA. The ruling in favor of the project enables the Sites Reservoir Authority to move ahead with the water rights process that will begin with hearings later in June and be completed in October 2024.

The ruling in this case came 150 days after the lawsuit was filed, in stark contrast to the 3 to 5 years of litigation typical in environmental challenges. Credit goes to Governor Newsom and the state legislature for passage of AB 149 enacted into law in July 2023. AB 149 establishes a 270-day "shot clock" within which CEQA challenges must be resolved. This case was the first test of the new law, which initially worked as it was intended. However, on June 18, 2024, the petitioners in this case filed an appeal, which will have to work its way through the judicial process.

The Sites Reservoir will provide 1.5 million acre-feet (AF) of off-line storage about 80 miles northwest of Sacramento, at an estimated cost of about \$4 Billion. It will increase the total volume of storage available in northern California by about 15% and will hold enough water to supply the needs of 3 million homes for one year. Because it is off-line, it will not impede the flow of the Sacramento River in any way. The reservoir will capture peak storm flows in the

winter from the Sacramento River, such as those created by atmospheric river storms. The average yield of the project is 240,000 AF per year of water that currently is washed to the sea during such storms, and make them available for environmental, urban and agricultural purposes later in the year. By operating in conjunction with other California Reservoirs, Sites Reservoir will substantially increase water supply flexibility, reliability and resiliency in drier years and will improve effectiveness of the State Water Project and Central Valley Project.

The project is needed to mitigate the effects of climate change on water supply, which results in a greater proportion of the state's precipitation to fall as rain instead of snow. The project will thus compensate for the reduced snowpack and runoff and provide operational flexibility in light of the uncertain climate swings anticipated in the future.

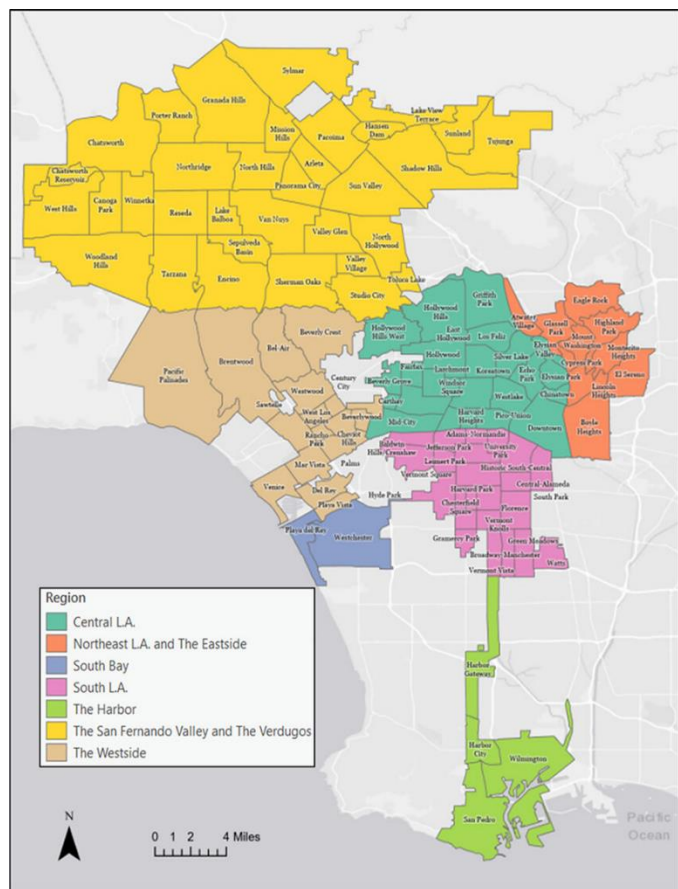
Mystery History Question

Presented by Jack Feldman

Los Angeles, the second most populous city in the U.S., spans approximately 469 square miles, making it one of the largest cities by land area. This widespread urban expansion presents significant challenges in providing reliable water and electricity to millions of residents, necessitating complex infrastructure and continuous maintenance and upgrades.

How many of the following major U.S. cities, combined, could fit within the geographical boundaries of Los Angeles?

- Boston
- Cleveland
- Manhattan
- Milwaukee
- Minneapolis
- Pittsburgh
- San Francisco
- St. Louis



Answers on page 19, OR Click [HERE](#) to got to the following link:

https://waterandpower.org/museum/Mystery_History.html

GUEST SPEAKERS

Summaries by Robert Yoshimura

GUESTS OF THE MONTH
MAY 2024

BEN WONG AND STEVEN KUO

SUMMARY OF 2024 WATER SUPPLY SYMPOSIUM

The Water Supply Symposium is an annual meeting to define the plan for operations for the upcoming 2024/25 runoff year (April – March). Contributors include appropriate organizations within the Water Resources, Water Operations, and Water Quality Divisions of the Department of Water & Power (DWP).

For 2024, water supply conditions of the three surface water sources for Los Angeles are slightly better than average. The State Water Project (SWP) has a snowpack 123% of normal, the LAAqueduct (LAA) snowpack is 101% of normal, and the Colorado River snowpack is 115% of normal (April 1st average).

The forecasted runoff from the LAA watershed is 103% of normal, which will yield approximately 290,000 Acre-Feet (AF) of flow to Los Angeles for the runoff year. This amount is slightly greater than last year's 280,000 AF, which was constrained by numerous turbidity events due to the record precipitation and flooding.

On the SWP, the state's Department of Water Resources (DWR) recently increased its allocation for the upcoming year to 40% of the contracted amount. At 30% allocation from the SWP, MWD's supply-demand balance is at the break-even point. Allocations greater than 30% will result in increased storage in MWD's water system, thus storage is expected to increase this year. MWD's system-wide total storage at the end of 2023 was 3.4 million AF which is the all-time high. Storage increased significantly in 2023 because of the record precipitation that year. Total storage today is remarkably triple the amount it was in 2000 despite the severe drought conditions since that time. Not all of the storage is available, however, because of extraction limitations, contamination of some groundwater sources, and distribution system limitations.

Locally, precipitation in the 22/23 runoff year was the 15th wettest on record and despite the persistent drought conditions that prevailed since 2000, the 10-year average precipitation at 14.8 inches per annum is now the same as the long-term average. This is due to the occurrence of a few years of exceptional precipitation among the many years of below-average precipitation during that period.

DWP's efforts to capture stormwater are now paying dividends. Water year 23/24 is the second-best year for local stormwater capture recorded to date. Those efforts resulted in a total capture and storage (in groundwater) of almost 100,000 AF of stormwater so far this year that will be available for future extraction.

Groundwater extractions from the three local basins (San Fernando, Sylmar, and Central) have historically averaged 61,000 AF/yr. but have declined recently because of contamination in



those sources. Pumping in the last seven years has been particularly low, averaging much less than the long-term average. Pumping in Runoff Year 2023-24 totaled only 4,700 AF. Current year extractions are expected to increase to about 40,000 AF, boosted by the three groundwater treatment facilities in the San Fernando basin that will come online later this year. Subsequently, future yields from groundwater are expected to approach the annual water rights limitation of 107,000 AF.

Recycled water deliveries for non-potable uses have averaged about 12,000 AF/yr. recently and that amount is expected to grow slowly as new customers come online in the next few years. In 2027/28, the Groundwater Replenishment Project will come online and will add 21,000 AF/yr. to local groundwater basins. The total volume of recycled water delivered in 2027/28 will thus increase to 42,500 AF/yr.

Water supply planning is intended to provide the water needed to meet demands. On the demand side of the equation, DWP has significantly reduced customer demand through its many conservation efforts over the years. Customer water use per capita as recently as 1986/87 was 187 gallons per day. Water use declined to 156 gallons per capita per day (gpcd) in 2006/07, and to 133 gpcd in 2013/14. During a severe drought year in 2017, water use further declined to 106 gpcd. Since then, despite the relaxation of water conservation measures, especially in 2023, water consumption has not rebounded and remains at about 103 gpcd this year. The long-term goal under the Sustainable City pLAn is to reduce that number to 100 gpcd by 2035.

The actual city-wide total demand in runoff year 2023/24 of 444,500 AF was more than 27,000 AF less than the forecast, further demonstrating the lack of water use rebound especially after lawn irrigation restrictions were changed from 2 days per week to 3 days per week in June 2023. Furthermore, total water use in runoff year 2023/24 was less than total water use in the extreme drought year of 2022/23. Forecasted demand in runoff year 2024/25 is 446,185 AF which represents the lowest forecast since the 1970s. The steady reduction in water use over the last 20 years has created new challenges for DWP in balancing supply against demand. Purchases of water from MWD are necessarily reduced, and that reduces the flexibility in choosing which sources to increase or decrease to satisfy demand while minimizing the cost of service to DWP's customers.

New state regulations for water conservation are expected to be implemented this year in June. The new regulations will establish regional water budgets that vary depending on location. Performance standards will also be imposed for residential indoor use, residential outdoor use, commercial and institutional landscaping, and system leakage rates. The regulations highlight the residential sector and establish a goal of reducing sector water use by 16% by 2040.

The water supply mix for the upcoming runoff year of 2024/25 will be comprised of 65% LAA, 23% MWD, 9% groundwater, and 3% recycled water. The historic record precipitation of 2023 enables higher LAA use than normal and operations for the year will attempt to maximize its use.

MWD's 10-year financial projection incorporates significant rate increases and property tax rate increases to cover the costs of their future programs. For the upcoming runoff year, treated water rates will increase 11% and in the following year, they will increase another 10%. DWP will consider those added costs in its planning for the next two years and beyond. For the last 10 years, DWP has been using Purchase Order Agreements with MWD which establish a minimum level of purchases for the year to help MWD with their operational planning. DWP has maintained its purchases above the minimum during that time. This process will be eliminated after this calendar year pending completion of MWD's business model plan.

**NURIT KATZ, DWP COMMISSIONER
AND CHIEF SUSTAINABILITY OFFICER AT UCLA**

CURRENT ISSUES FACING THE DWP COMMISSION

Commissioner Katz shared her opinions and perspectives on a number of challenges now facing the Department of Water & Power that are of mutual interest to us - the Board of Directors of Water & Power Associates (W&PA). She acknowledged the experience of the members of the Board and, throughout her presentation, was refreshingly open to suggestions from and discourse with those members. She also invited us to communicate with her at any time regarding these issues.



Jerry Gewe opened the discussion by asking the Commissioner to comment on her thoughts about DWP's ambitious long-term plan for 100% renewable energy by 2035. He and other Board members also shared our concerns about the practical ability of DWP to build the necessary infrastructure in such a short timeframe and to transparently track and communicate cost and progress and adjust as needed. Commissioner Katz was sincere in her response, acknowledging our concerns and noting the specific areas she may be able to address with the full Board of Commissioners. She clearly believes the project and its timeframe are achievable and explained specifically why:

1. The new DWP General Manager Janisse Quinones brings the knowledge of power utilities and crisis management combined with an infectious enthusiasm for her job and for getting things done that will provide the right leadership to accept the challenges we are facing.
2. Her confidence in the advancement of technology that will make the transition easier, faster, and less expensive.
3. DWP is implementing a new dashboard to track projects and address the transparency issue that concerns us.
4. DWP is revising its procurement process to expedite equipment purchases and contracting to reduce lead times in construction.
5. DWP and the City are revising the recruitment and hiring process to expedite the significant increase in staffing that will be needed to implement this project.

She acknowledges the concerns about the construction process – i.e. street closures, rush-hour traffic, community resistance, logistics, etc. are real.

Regarding the \$20 billion cost penalty for the early (2035) target date approved by the City Council and Mayor, she believes that significant benefits do accrue from completing the transition sooner rather than later. Earlier completion reduces net greenhouse gas emissions and thus helps to reduce the impacts of climate change. Furthermore, the rest of California and the world look to Los Angeles as a leader who can set an example for them to follow. Our experience with early implementation will benefit anyone else who ultimately implements a similar program, and that is eventually everyone else. Because there are benefits to being a leader in this field, we must consider the tradeoff of such benefits against their cost.

With regard to our concerns about the lack of clarity regarding the cost of needed distribution system upgrades, the Commissioner promised to ask the rest of the Board and the highest levels of staff about whether or not the estimated \$80 billion price includes those distribution system upgrades. (Ed. Note – In an email dated June 27, 2024, Commissioner Katz confirmed that the initial LA 100 study cost estimates did not include upgrades to the distribution system.)

Another issue of mutual concern that Commissioner Katz addressed was the need for a better explanation of DWP's bills to its customers. The cost pass-throughs reflected on customers' bills add significant cost to those bills and are often not proportional to any base rate increases that are implemented. She will consider changes to the structure of the bill and to increasing the frequency of billing from bi-monthly to monthly. She agreed with our view that DWP should emphasize that its bills are lower than those of investor-owned competitors such as Southern California Edison.

On the water side of the business, the Commission is focused on the LA Green New Deal target of 70% locally sourced water by 2035 and on Operation NEXT. Commissioners Katz and McGraw serve on an Ad Hoc Board Committee on LADWP and Public Works Project Alignment, and have been working closely across the two Boards as well as with staff and the Mayor's office regarding Operation NEXT and the future of water in Los Angeles. She reported that there will be a joint presentation at the July 9 Board meeting on this topic. Ms. Katz expressed her desire to better integrate the water and power sides of the business. As an example, she mentioned that the charging hubs being constructed by the Power System provide an opportunity for the Water System to showcase water-saving landscape techniques.

My primary takeaway from the meeting was that Commissioner Katz brings a moderate and open-minded perspective to the Commission and will consider a variety of opinions in her role as a policy maker.

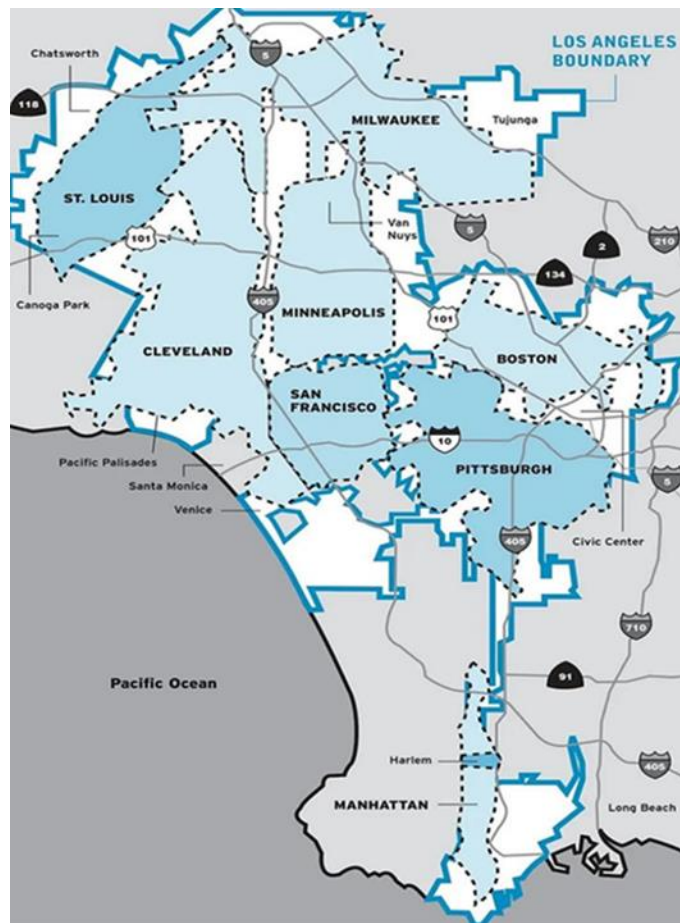


Mystery History Answer

Answer: All 8 cities (see map)

More information at:

https://waterandpower.org/museum/Mystery_History.html OR Click [HERE](#)




SAVE THE DATE

2024 CALENDAR

GUEST OF THE MONTH

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



ARAM BENYAMIN CHIEF OPERATING OFFICER LADWP	JULY 10, 2024 Retrofit of JFB and other Items
RAPHAEL VILLEGAS OPERATION NEXT MGR LADWP	AUGUST 14, 2024 Status of Operation Next
FIELD TRIP HEADWORKS RESERVOIR SITE	SEPTEMBER 11, 2024
TO BE ANNOUNCED	OCTOBER 9, 2024

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