



APRIL 2023



WATER & POWER ASSOCIATES, INC.

NEWSLETTER

For a Sustainable Los Angeles



Update: The Impact of the Atmospheric River Storms on California's Water Supply

By Robert Yoshimura

The original article upon which this update (mid-March) is based was published in the January 2023 edition of this newsletter. At the time of publication, nine atmospheric river storms had pummeled California resulting in record precipitation, flooding, and an exceptional start to the snowpack accumulation in the Sierras. Those storms made a deep dent in the 23-year drought that has plagued the state, and created an optimistic outlook for this year's water supply.



However, it was too early in the season for the state's water agencies to definitively conclude the final water supply outcome (including water allocations). Since then, better-than-normal precipitation in February followed by two more massive atmospheric river storms in early March have improved the outlook even more. The following is a summary of how that improvement has changed our current perception of both the drought and the water supply situation for California.

Drought conditions in California have improved drastically in the three months since the atmospheric river storms began in late December (see Drought Monitor maps below). In mid-December, 98% of the state was in some stage of drought with 80% experiencing severe (orange) or worse conditions. 37% of the state was considered to be in extreme (red) or exceptional (brown) drought. By mid-January, the nine atmospheric rivers wiped out all areas of extreme and exceptional drought, but 43% of the state was still considered to be in severe drought. Another 50% of the state was experiencing moderate drought conditions. However, 93% of the state was still in some stage of drought. Today, only 36% of the state is in any stage of drought and 64% is no longer considered to be in drought.

The 11 atmospheric rivers have clearly had a significant impact on the drought, at least temporarily (for this year). However, we are not "out of the drought" yet. We have been in a 23-year long megadrought that has been punctuated by four years of normal or heavy precipitation similar to this year. It is thus highly likely that drought conditions will return as soon as next year, if recent patterns continue. Most scientists believe the drought is the result of climate change that will not be reversed any time soon.

(Continued on page 3)

Editor's Column

What a difference a year makes

Last year at this time we were in the midst of a severe drought. The State Water Project was drastically reducing allocations. The Metropolitan Water District was in the middle of developing measures for rationing of water supplies to their northern Agencies due to the reductions in supply from the State Water Project.

On the Power Side, the LADWP was in the middle of developing a Strategic Long Term Resource Plan (SLTRP) to meet City Council directives to have the City implement a Carbon Neutral Resource plan by 2035, 10 years ahead of the California Mandate.

Fast forward a year

We have what may possibly be the largest eastern Sierra snowpack since LADWP began keeping records in the 1920's. LADWP is looking to a very full aqueduct from the Owens Valley. The State Project has increased the anticipated deliveries to 35% and this is likely to increase substantially as the recent snowpack and runoff to their system in northern California are taken into account. The Metropolitan Water District has eliminated their drought allocations for their agencies. For now, everything is positive, however the long-term picture is not as clear, especially with groundwater issues in the Central Valley.

See our lead article on page 1, "The Impact of the Atmospheric River Storms on California's Water Supply" for additional information.

On the Power side, a draft plan has been issued, although additional details on the feasibility of implementing the plan given the costs, resource requirements (staffing and procurement), and equitability issues that would be involved in implementing the plan are under review by LADWP management.

Your Water and Power Associates has been providing input to the Department and City Leadership on these issues.

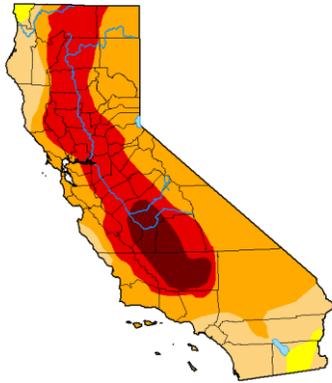
If you are not a current member, please consider supporting us and receiving our quarterly newsletters to stay up to date on these vital issues. You can apply for or renew your membership by completing and returning the application on page 16 and returning it along with the \$30 annual membership fee to the address shown there, or you can apply through our website at:

<https://waterandpower.org/membership.html>.



Jerry Gewe, Editor

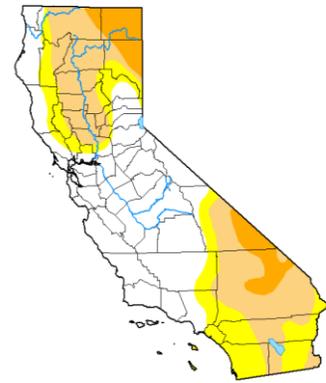
(The Impact of the Atmospheric River Storms on California's Water Supply, Continued from page 1)



December 20, 2022



January 17, 2023



March 14, 2023

The 11 total atmospheric rivers have yielded the most benefit to the eastern Sierra watershed which supplies the City of Los Angeles through its Los Angeles Aqueduct. As of March 14, 2023, the average snow water content had reached 57.8 inches, which exceeds the peak snowpack of the wettest year on record (2016-2017) by nearly 7 inches. The snowpack is 275% of normal for this date and 256% of normal for April 1. Additional precipitation is expected in the next week or so that should assure that 2023 will be the best year ever.

On the other side of the Sierra in the State Water Project (SWP) watersheds, the snowpack is near record-breaking as well. As of March 14, 2023, the statewide snow water content was 54.2 inches which is trending slightly above the wettest year on record (1982-1983). The current amount is 217% of normal for the date, and 208% of the April 1 average. In January the statewide snowpack was 121% of the April 1 average, so a significant increase has occurred since then.

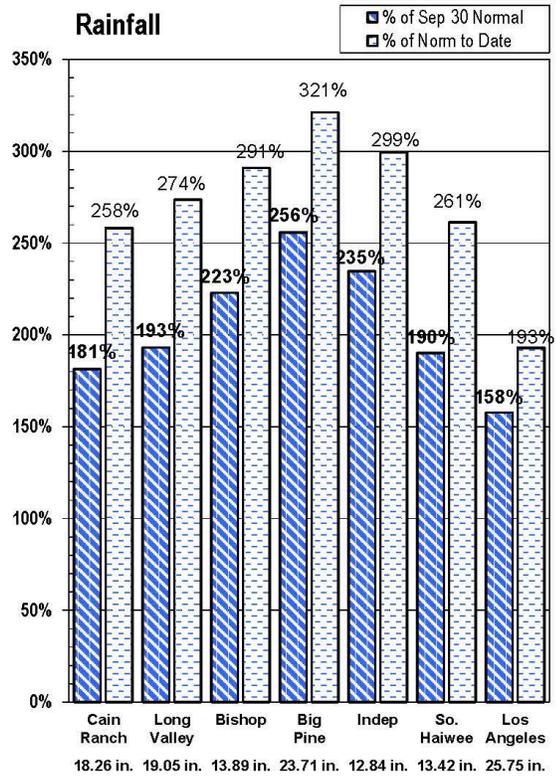
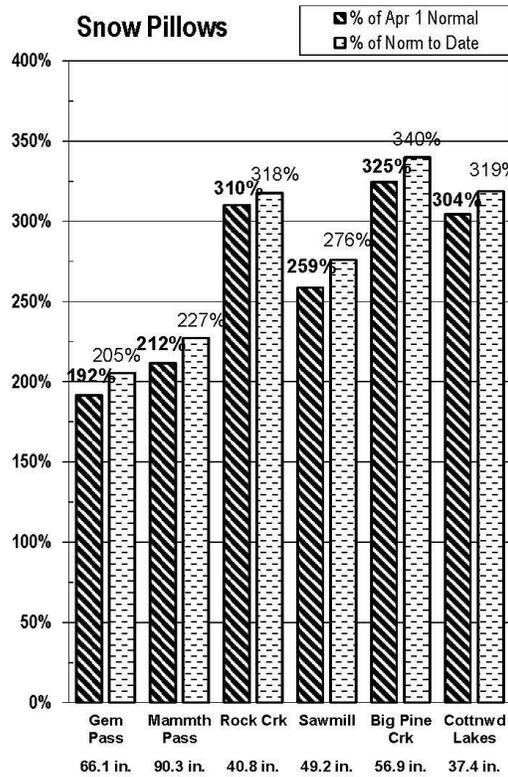
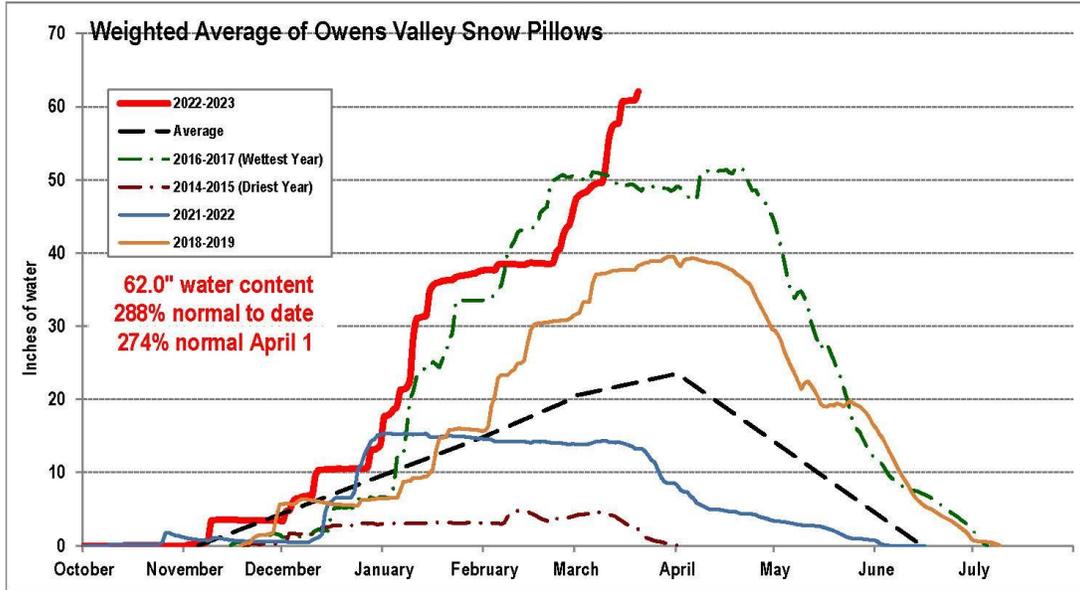
In January, we reported that in spite of the excellent snowpack, reservoir levels were disappointing and raised questions about the outlook for water supply. Since then, reservoir levels have risen steadily, and in many cases, water releases were needed to make room for flood flows from the anticipated heavy runoff this spring. We are thus assured that we will welcome the summer with full reservoirs and a good water supply. Since January, the Department of Water Resources has increased the SWP allocation to its contract agencies from the initial 5% to 30%, then again to 35% late in February. We anticipate that after the impacts of the early March storms are fully known, additional increases in allocations are likely.

Unfortunately, the state's groundwater situation is not so rosy. Between 40% (normal year) and 60% (drought year) of the state's water supply comes from groundwater. As a result, a majority of the state's groundwater basins have been severely over drafted and are subject to limitations of use. More than half of all monitoring wells show a 20-year declining trend, with most of those wells located in the central valley. Unlike surface water resources, groundwater will take many years of above normal precipitation combined with reductions in withdrawals to recover.

On the Colorado River, very small gains in storage have occurred since January, but the dire conditions resulting from 23 years of drought remain. Lake Mead water levels reached an all-time low of 1,040 ft. in July 2022, representing a 175 ft. decline since 1999. Since then, the monsoon storms of last summer and the January atmospheric rivers have increased its elevation to 1,046 ft. Clearly, the 6-foot gain after epic storms demonstrates the difficulty of restoring Lake Mead without substantial cutbacks in water use. On the bright side, the abundant water supply from SWP and LAA may create an opportunity for California to reduce its use of Colorado River water for at least one year to help increase the water level of Lake Mead.

Snow Pack in the Eastern Sierra Breaks Record for the Highest Ever Measured!

EASTERN SIERRA
CURRENT PRECIPITATION CONDITIONS
March 20, 2023



Measurement as Inches Water Content; Precipitation totals are cumulative for water year beginning Oct 1



OFFICERS

Jerry Gewe
President

Julie Spacht
1st Vice President

James McDaniel
2nd Vice President

Robert Yoshimura
Secretary

Julie Spacht
Assistant Secretary

Bill Engels
Treasurer/Membership

Phyllis Currie
Assistant Treasurer

Jack Feldman
Webmaster

Jerry Gewe
Newsletter Editor and
Historical Preservation

William Glauz
Assistant Newsletter
Editor

BOARD OF DIRECTORS

William Barlak

John Dennis

Rod Fishburn

Duane Georgeson

George Higgins

Walter Hoye

Larry Kerrigan

Razmik Manoukian

Saif Mogri

Scott Munson

Susan Rowghani

Don Sievertson

Walter Ziesl

POWER ARTICLES WRITTEN OR SUMMARIZED
BY WILLIAM GLAUZ, SOURCE ARTICLES NOTED

Diablo Canyon Nuclear Plant Approved for Continued Operation

<https://www.powermag.com/nrc-approves-move-to-keep-diablo-canyon-nuclear-plant-open/>

On February 28 the California Energy Commission (CEC) approved a recommendation to extend the operation of Pacific Gas and Electric's (PG&E) 2,300 MW Diablo Canyon Nuclear Power Plant through 2030 to ensure electricity reliability. Two days later the Nuclear Regulatory Commission (NRC) approved PG&E's request for an exemption to keep the plant open beyond its operating license expiration of 2024 and 2025 for each of its two units. In January the NRC had denied a request from PG&E to renew a review of the plant's operating licenses.

The desire to keep the plant operating is based on data showing California risks energy supply shortfalls during extreme weather events driven by climate change. Six months ago, California lawmakers approved legislation recommended by Governor Newsom to



Photo by Lionel Hahn, REUTERS

keep the plant running until the end of this decade to help California avoid energy shortages while more renewable generation facilities are built. The legislature approved Newsom's call to lend PG&E as much as \$1.4 billion to keep Diablo Canyon operating.

PG&E in 2016 said it would close the nuclear plant in 2025, when the current operating license expires, in part because of concerns about what could happen if an earthquake impacted the site along the coast in San Luis Obispo County. Environmental groups also said Diablo Canyon should be shuttered as part of California's move to transition its power sector to more renewable resources. PG&E has said it will submit a license renewal application by the end of this year.

In related news, the Biden administration has pledged another \$1.2 billion to help extend the operating life of older or distressed nuclear power plants, with Energy Secretary Jennifer Granholm saying nuclear power is needed to support the nation's clean energy goals.

City Council Approves DWP Moving Forward with Scattergood Conversion to Hydrogen

<https://www.power-eng.com/hydrogen/l-a-authorizes-conversion-of-largest-gas-plant-to-green-hydrogen/#gref>

On February 8, the Los Angeles City Council voted 12-0 to authorize LADWP to begin a competitive bidding process for design, engineering, procurement, and construction, testing and commissioning of the Scattergood Generating Station (SGS) Units 1 and 2 Green Hydrogen-Ready Modernization Project.



The existing SGS units 1 and 2 must be decommissioned in 2024. The LA100 identified a need for renewably-fueled long duration capacity at or near all of LADWP's existing power plants. LADWP has identified the Scattergood project as an important step for the city to meet its goal of being 100 percent carbon-free by 2035. The city's goal is to eventually burn 100% green hydrogen at Scattergood, and do this at some of its other natural gas-burning plants as well.

LADWP is proposing to install fuel-flexible combined cycle equipment capable of burning significant amounts of renewable energy-sourced hydrogen to replace the generating capacity currently provided by SGS Units 1 and 2. The 346 MW project would cost an estimated \$800 million, with an in-service date of Dec. 30, 2029.

Jason Rondou, LADWP Director of Resource Planning, told The Los Angeles Times that Scattergood should be able to burn at least 30% green hydrogen on day one. That's the same percentage being initially targeted at the Intermountain Power Project in Utah.

The Scattergood project has faced some opposition and skepticism. A coalition of 21 climate, water, and social justice organizations urged the L.A. City Council to vote no on the project in a February 7 letter. The organizations cited concerns over the carbon impact of blending hydrogen with natural gas, increased NOx emissions, potential cost overruns and the challenge of scaling storage and transportation infrastructure for the project.

EV Charging Station Infrastructure Update

<https://www.whitehouse.gov/briefing-room/statements-releases/2023/02/15/fact-sheet-biden-harris-administration-announces-new-standards-and-major-progress-for-a-made-in-america-national-network-of-electric-vehicle-chargers/>

On February 15, the White House issued a Fact Sheet that highlighted the 2021 Infrastructure Law allocating \$7.5 billion in EV charging, \$10 billion in clean transportation, and over \$7 billion in EV battery components. The Fact Sheet also addressed actions aimed at improving the nation's electric vehicle charging network. Some of the actions included:

1. New standards to make charging EVs convenient and reliable;
2. The Federal Highway Administration outlined its final plan for compliance with the Build America, Buy America Act for federally funded EV chargers and announced details for its soon-to-launch Charging and Fueling Infrastructure (CFI) discretionary grant program;
3. The Joint Office of Energy and Transportation released a notice of intent to issue a funding opportunity for its Ride and Drive Electric research and development program; and
4. The Department of Energy announced \$7.4 million in funding for seven projects to develop innovative medium-and heavy-duty EV charging and hydrogen corridor infrastructure plans.

The Fact Sheet also announced that Tesla, for the first time, will open a portion of its U.S. Supercharger and Destination Charger network to non-Tesla EVs, making at least 7,500 chargers available for all EVs by the end of 2024. The open chargers will be distributed across the United States.

General Motors, EVgo, Pilot, Hertz and other companies also announced new commitments to expand their networks of public charging ports for electric vehicles in the next two years, using private funds to complement federal spending.



AP Photo/Godofredo A. Vásquez

UAMPS Proceeds with Plans for a Small Nuclear Reactor Plant

<https://www.sltrib.com/renewable-energy/2023/03/03/utah-cities-are-sticking-with/>

For several years, the Utah Associated Municipal Power Systems (UAMPS), which has been a participant in the Intermountain Power Project with LADWP for decades, has been pursuing a new baseload energy supply as a primary partner in the development of a new Carbon Free Power Project (CFPP). The CFPP is planned to be a 462 MW demonstration small modular nuclear reactor at the Idaho National Laboratory, expected to be operational in 2030. The developer of the CFPP is Oregon based NuScale Corporation.



Rendering by NuScale

On February 28, 26 of UAMPS members voted to continue with the CFPP after NuScale said in January the target price for power from the plant increased 53% from the previous estimate of \$58 per MWh to \$89 per MWh, a jump that raised concerns about whether customers would be willing to pay for the power it generates. The price increase was mainly due to inflation and the rising cost of steel. The 26 entities that stayed in CFPP are mostly small cities in Utah, but it does include systems in New Mexico, Nevada and Idaho.

UAMPS originally invited all 50 of its members to join the project, but many including Logan, Bountiful and Murray have pulled out over cost concerns.

rPlus Hydro Submits Final License Application for 1,000 MW White Pine Pumped Storage

<https://www.power-eng.com/energy-storage/pumped-storage-hydro/rplus-hydro-submits-final-license-application-for-1000-mw-white-pine-pumped-storage/>

rPlus Hydro LLLP has submitted a final license application to the Federal Energy Regulatory Commission for its 1,000 MW White Pine Pumped Storage project in White Pine County, Nevada. FERC will now begin the environmental review and licensing process for White Pine Pumped Storage with local, state and federal agencies. Construction could start as early as 2025.

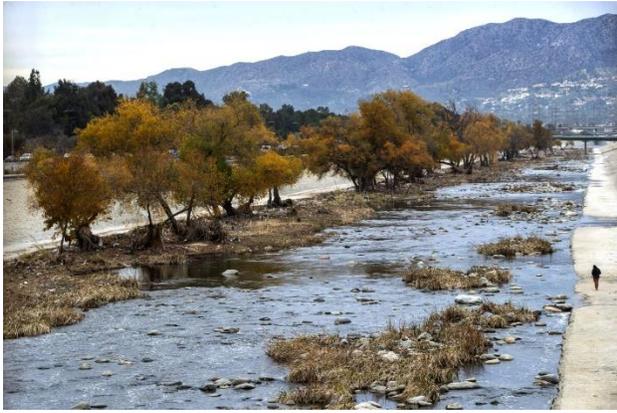
The proposed project is expected to provide eight hours of energy storage at its full capacity of 1,000 MW, which is equivalent to about an eighth of Nevada's peak power demand on a hot summer day. The project represents more than a \$2.5 billion investment in Nevada's energy infrastructure and will support Nevada's move toward the clean energy goals adopted by its legislators and approved by its voters.



The proposed project is located approximately eight miles northeast of Ely, Nevada, and will be situated mostly on lands of the United States administered by the Bureau of Land Management, Ely District Office. The project facilities include two reservoirs, underground generation equipment, and a new transmission line. One of the reservoirs will be in the Duck Creek Range, and the other in the Steptoe Valley near Highway 93. Energy for pumping, and power generated by the project, will be delivered through a new 25-mile-long transmission line connecting the project with the Robinson Summit Substation.

Status of the Safe Clean Water Program (Measure W)

The Safe, Clean Water Program (SCWP) was created by Measure W which was overwhelmingly passed by the voters of Los Angeles County in November of 2018. The measure authorized a parcel tax of 2.5 cents per square foot of impermeable land on property owners within the County to fund stormwater capture projects to increase the region's water supply and drought resiliency. A secondary objective of the program is to improve the quality of water discharged to the ocean. The Los Angeles County Flood Control District (LACFD) is the agency charged with managing and implementing the program. The program prioritizes investments in disadvantaged communities and in projects that employ nature-based elements. Nature-based elements include the removal of paving and hardscape to allow water to percolate into the ground and the use of plants and soil to filter the water.



The SCWP uses a rather complex governance structure that is intended to maximize public input and transparency. The program has a total of 170 committee members including 11 Regional Oversight Committee members, 6 Scoring Committee members, and 153 members who sit on 9 Watershed Area Steering Committees to provide oversight to funded regional projects. Additionally, each municipality manages their projects at their discretion utilizing existing organizations for management and oversight.

SCWP competitively awards grants to candidate projects based on criteria they developed to achieve the goals of the program.

The program is currently in its fourth year and has generated approximately \$280 million per year of tax revenue. The LACFD distributes the money to three sub-programs as follows: 1) 50% to regional projects, 2) 40% to each municipality within the County, and 3) 10% to management and administration including education and public outreach. To date, \$670M in Regional Program funding has been allocated to 101 Projects, 14 scientific studies, 41 Feasibility Studies, and 12 Watershed Coordinators across the 9 Watershed Areas. While the casual observer may not realize it because very few of the funded projects are yet “in the ground,” significant progress is being made to create the infrastructure needed to capture stormwater within Los Angeles County.

Examples of projects being developed or considered as part of the SCWP include the construction of new parks and greenspace on previously impermeable land, the removal of concrete lining from the bottoms of flood control channels, and the replacement of paved playgrounds at schools with permeable concrete and landscaping. One significant large-scale project is the Rory M. Shaw wetlands park project in Sun Valley that will convert a 46-acre landfill into a wetlands park. The project will capture 30,000 acre-feet of water per year, or enough to supply 120,000 residents.

A complete list of funded regional projects along with a cost-loaded schedule for each project can be found at: <https://portal.safecleanwaterla.org/sip-tool/>. Additionally, the SCWP website is an excellent source of detailed information about the program and individual projects including maps showing the location of each funded project and each project under consideration. That website can be found here: safecleanwaterla.org.

A watchdog group known as the Los Angeles Waterkeeper recently completed an impressively thorough and balanced study of the SCWP program and its progress to date. The LA Waterkeeper released a report on that study in February which was mildly critical of the program’s slow progress and lack of a long-term vision for stormwater capture in the region. That study also found that grant applications for regional projects have slowed considerably over the first three years of the program, and that the projects are getting smaller.

That study pointed out several projects that it considered exemplary. One such project will convert a contaminated industrial site into a park that will capture and treat stormwater runoff. Overall, it identifies 20 such exemplary projects and describes them in some detail. The full report is titled "Changing the Course? What’s Worked, What Hasn’t, and What’s Next for the SCWP. That report can be found at [01 LAW SCWP Assessment.pdf - Google Drive](#).

Public works projects tend to develop slowly because of the need for public input, environmental assessments, permits, and political oversight. A recent LA Times article was critical of the slow progress of the program, but explained in detail the constraints faced by public agencies attempting to plan for the types of projects being proposed as part of the program. That article also pointed out that the majority of projects funded to date focus on water quality aspects rather than stormwater capture.

The program is in its very early stages with most funded projects in the developmental phases, explaining in part why very little infrastructure has been constructed to date. However, a significant amount of money has been committed to many mostly small projects that together should yield visible results within the next five years. For anyone wishing to learn more about the program, I highly recommend a visit to the SCWP website and to peruse the LA Waterkeeper report mentioned above.

Mystery History Question

Presented by Jack Feldman



Question

This 1929 photo shows a dam being reinforced by adding tons of earth on the downstream side as a precaution shortly after a similar dam failed catastrophically. The dam and lake behind it are still there today.

Name the dam and lake (hint: their location is within the LA City limits):

_____ and _____

Answers on page 13, or Click [HERE](#)

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

GUEST SPEAKERS

Summary by Robert Yoshimura

GUESTS OF THE MONTH
MARCH 2023

**SIMON ZEWDU, Director of Power System Regulatory and Innovation Division, and
DENIS OBIANG, Manager of Transmission Planning**

The Future of the LADWP Transmission System to Meet the Goals of the Strategic Long Term Resource Plan

Simon Zewdu began the presentation with an introduction to the Power System's Strategic Transmission Planning process which emerged from the realization that unprecedented load growth over the next 15 to 20 years would require a longer-term focus compared to the traditional way of planning for horizons of 10 years or less. Simon expects load to double from 10,000 MW to 20,000 MW by 2040 primarily driven by the electrification of the transportation sector and electrification of commercial and industrial buildings. That increase in load combined with the conversion to renewable sources will require significant increases in transmission capacity from sources located far from the points of use. He then introduced Denis Obiang, who provided a PowerPoint presentation on the Strategic Transmission Plan.



The Strategic Transmission Plan addresses the challenges of how to decarbonize the grid while accommodating the significant load increase, and how to protect the reliability of transmission against the increasing threat of wildfires. The LA 100 study defined the possibilities for decarbonization and on that basis the Mayor and Council mandated a 2035 goal for achieving 100% renewable energy. Achieving that goal requires an unprecedented build-out of generation, transmission, and distribution facilities. To further complicate matters, the plan must also incorporate affordability, equity, and reliability of service. Today, transmission projects are long-lead undertakings that require planning far into the future and must allow for time and efforts to acquire land, obtain permits, conduct environmental assessments, and construct the facilities. Such factors are not taken into account in the current 10-year planning process.

The current state of the transmission system consists of three corridors bringing power into Los Angeles from remote sources and the in-basin transmission system connecting the in-basin powerplants to various parts of the local distribution system. The three corridors are the Pacific Direct Current Intertie (PDCI), the Barren Ridge Corridor, and the Victorville-LA Corridor. Of the three, PDCI is the only one that is underutilized and has available capacity for future expansion. Additionally, the in-basin system is highly congested and not suited for future load increases. In

order to accommodate the ambitious goals of the SLTRP, the transmission system will have to be greatly expanded to bring new renewable energy to Los Angeles from distant locations throughout the western states and to replace the locally generated energy from in-basin fossil-fueled power plants.

The Strategic Transmission Plan will provide a roadmap for future transmission system upgrades, looking far enough into the future to accommodate all anticipated increases in load, the location of renewable energy sources, and new technology. As part of the planning process, sources and locations of current and future renewable energy sources have been identified including hydropower, geothermal, solar, and wind, in a multitude of diverse locations. The identified sources include:

- Offshore wind from the coastal area of California, Oregon and Washington
- Solar power from the Imperial Valley of California
- Solar and geothermal from Nevada
- Wind and solar from Arizona and New Mexico
- Green energy from the IPP hub in Utah (wind, solar, and hydrogen turbine)
- Wind from the Dakotas, Montana and Wyoming
- Hydropower from the Pacific Northwest



Following identification of renewable energy sources, coordination with the SLTRP planning team yielded a recommended mix of resources. From that resource mix, modeling and simulation of various scenarios was conducted to determine potential transmission routes. With renewable energy, the diversity of types of sources and their locations is an important element in planning for

transmission projects to assure the reliability of energy delivery. Finally, feasibility assessment criteria were applied to all transmission solutions from all scenarios. The criteria used were:

- Operability and reliability
- Economics (cost effectiveness)
- Transmission development risks
- Environmental risks
- Renewable development risks, especially geothermal and offshore wind

The preliminary assessment described above resulted in the proposal of six concepts for transmission corridors that would achieve the goals of the SLTRP. The concepts are a combination of new corridors, upgrades to existing corridors, and increased use of existing corridors. The six concepts are:

1. Convert the two 287 kV AC lines from Victorville to Century to DC to access renewable energy in Nevada
2. Construct a new corridor heading east to access renewable energy in New Mexico
3. Increase utilization of PDCI to access renewable energy in Washington and Idaho
4. Diversify the path from the LA Basin to Barren Ridge area to access renewable energy in California
5. Construct a DC submarine cable from the Diablo Canyon switchyard to coastal Los Angeles stations to access wind and renewable energy offshore
6. Upgrade IPP Southern Transmission System to access renewable energy including hydrogen

Denis Obiang stated that in order to decrease cost to DWP while increasing the likelihood that the projects get built, DWP will reach out to neighboring transmission owners to develop the projects as jointly owned ventures.

The above six concepts will continue to be developed in conjunction with the SLTRP planning process to ultimately arrive at final transmission solutions.



Mystery History Answers

Mulholland Dam and Lake Hollywood

More information at:

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

Water and Power Associates Website

The Water and Power Associates website is an invaluable resource for anyone interested in learning about the history and current issues facing the water and energy sectors in Southern California and the West. The goal of the website is to provide objective information on these topics while also preserving the regional history of water and electricity and disseminating knowledge of the multicultural history of the greater Los Angeles area.

One of the unique features of the Water and Power Associates is that it is an independent, membership-funded corporation. This means that the organization is able to provide the public with critical information on water and electric issues without constraints. As a result, the members of the organization are frequently sought out by local and state officials, historians, authors, filmmakers, and others as an informed, reliable resource.

The screenshot shows the homepage of the Water and Power Associates website. At the top, the logo reads "Water and Power Associates" with the tagline "Informing the Public about Critical Water and Energy Issues facing Los Angeles and California". Below the logo is a navigation menu on the left side, listing various sections such as Home, Mission, Museum, and Legislative Positions. The main content area features a mission statement, a "PRESERVE HISTORY" section, a "FOLLOW UP-TO-DATE RULES AND REGULATIONS ON WATER AND POWER ISSUES" section, and a "PUBLICLY TAKE POSITIONS ON WATER AND ENERGY ISSUES" section. The mission statement is: "to inform and educate its members, public officials, and the general public on critical water and energy issues affecting the citizens of Los Angeles, Southern California and the State of California." The "PRESERVE HISTORY" section lists: "Create a Virtual History Museum with 14,000 photo images including descriptions and historical notes that show the roles of both water and electricity played in the development and growth of Los Angeles as well as preserving". The "FOLLOW UP-TO-DATE RULES AND REGULATIONS ON WATER AND POWER ISSUES" section lists: "Hold monthly 'Current Issues' informational talks with top officials, policy makers from state and local utility agencies" and "Keep current by attending board meetings and taking". The "PUBLICLY TAKE POSITIONS ON WATER AND ENERGY ISSUES" section lists: "Write letters, editorials and white papers to elected, appointed officials and print news media when it may be political incorrect for others to do so."

The Water and Power Associates website offers a variety of resources for people looking to learn more about these important issues. In addition to newsletters that cover current pressing issues in Los Angeles and Southern California, the website also features op-ed pieces and legislative positions on water and energy issues. The organization also works with historical societies to preserve historical records, and the website's virtual museum contains over 20,000 images with historical notes.

By exploring the Water and Power Associates website, visitors can learn about the history of water and power and its contribution to the development of Los Angeles. They can also stay up to date on recent newsletters and op-ed pieces that offer informed commentary on current water and energy issues affecting the region. Whether you are a member of the media, a politician, or a concerned citizen, the Water and Power Associates website is an essential resource for learning about these critical issues.

Visit our website at:

<https://waterandpower.org/index.html>

Visit our virtual museum at:

<https://waterandpower.org/museum/museum.html>

Water and Power Associates
Informing the Public about Critical Water and Energy Issues facing Los Angeles and California

Menu

- Home
- Mission
- Museum
- Mulholland Service Award
- Major Efforts
- Board Officers and Directors
- Positions on Owens Valley and the City of Los Angeles Issues
- Legislative Positions on Water Issues
- Legislative Positions on Energy Issues
- Recent Newsletters
- Historical Op Ed Pieces
- Membership
- Contact Us
- Search Index

Mulholland/Scattergood Virtual Museum

Power

- [Electricity in Early Los Angeles](#)
- [Electricity on the Aqueduct](#)
- [First Municipal Power Pole](#)
- [St. Francis Dam Disaster](#)
- [Extra Scattergood Biography](#)
- [Construction of Hoover Dam](#)
- [Early Power Generation](#)
- [Early Power Transmission](#)
- [Early Power Substations](#)
- [Early Station Operations](#)
- [Early Distribution Stations](#)
- [Early Power Distribution](#)
- [Early Los Angeles Streetlights](#)

William Mulholland (1875-1929)

Water

- [Water in Early Los Angeles](#)
- [Zaneros - 1781-1903](#)
- [Zania Madre - LA's Original Aqueduct](#)
- [Municipal Ownership - 1902](#)
- [Fred Eaton and William Mulholland](#)
- [William Mulholland Biography](#)
- [Three Fathers of the LA Aqueduct](#)
- [The Story of the LA Aqueduct](#)
- [Construction of the LA Aqueduct](#)
- [LA Aqueduct Opening Ceremony](#)
- [Metropolitan Water District](#)
- [Colorado River Aqueduct](#)
- [Mulholland-Colorado Aqueduct](#)

SAVE THE DATE

2023 CALENDAR

GUEST OF THE MONTH

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



JASON RONDOU DIRECTOR, POWER SYSTEM PLANNING	APRIL 12, 2023 LADWP's Planned Power Distribution System Upgrades
WATER SYSTEM REP TBD	MAY 10, 2023 LA Water Supply Outlook For This Year And Beyond
LADWP MANAGER TBD	JUNE 14, 2023 Current Issues Facing LADWP
SPEAKER TBD	JULY 12, 2023 Topic TBD

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.