

Water and Power Associates, Inc.

Year 42, Volume 4

Newsletter

October 2013



Notes from
our President,

Edward Schlotman

An Op/Ed article published in the Los Angeles Times on August 19th discussed the shrinking Colorado River and the serious consequences that will result from that event. It is something we all need to be aware of and think about. The article, by Craig McKay, a co-director of Protect the Flows, starts by saying that, "On Aug. 7, the head of the Southern Nevada Water Authority called for federal disaster relief to address the consequences of water scarcity in the Colorado River system. On Friday, the Bureau of Reclamation announced it would be forced to cut the flow of water into Lake Mead in 2014 to a historic low."

As an organization we are aware of the agreements and legal decisions, known as the Law of the River, going back almost a century, that govern water distribution from the Colorado River for seven states and Mexico. As Associates we should also be aware (at least on the water side!) there are two major reservoirs that help collect and distribute Colorado River water. One is Lake Mead which sends it to Nevada, Arizona, California and Mexico. The second is Lake Powell which gets water from Utah, Wyoming, Colorado and New Mexico and delivers it to Lake Mead. Mr McKay states that: "For the first time, Lake Powell releases will fall 8.23 million acre-feet of water, to 7.48 million acre-feet, potentially reducing allotments down the line and setting off a cascade of significant consequences." *(Continued on page 2)*



By Gerald Gewe

Los Angeles Aqueduct Centennial 2013

November 5, 1913, the Los Angeles Aqueduct was dedicated and began supplying water to the City of Los Angeles. None present at the dedication could have imagined the changes to Southern California that would result from this action. The water delivered through this aqueduct has made possible the metropolis we know as Los Angeles, both physically and politically.

This year we celebrate the Centennial of this event (the dedication and initial operation of the Los Angeles Aqueduct). To properly recognize this accomplishment and its role in the City of Los Angeles the Department of Water and Power, along with other organizations, is sponsoring the following events:
(Continued on page 3)



By Jack Feldman

One of the most entertaining ways of experiencing (or reliving) family history and, for that matter, city history, is to browse through old photo albums. We at Water and Power Associates have provided such an album that includes over 4,000 early historical photos covering over 150 years of Los Angeles' growth. These photos capture some of the more significant historic events, views, and buildings that define the great City of Los Angeles.

A little more about our organization first. The Los Angeles Water and Power Associates, Inc. is a nonprofit, independent, private organization incorporated in 1971 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. That is certainly our primary mission, however, we also have a secondary purpose...and that is to educate the public on how water and electricity played such a vital role in the growth and development of this city. That's why we put together a comprehensive virtual museum that presents different aspects of the development and evolution of water and power and its delivery to the people of the City of Los Angeles. *(Continued on page 4)*

~ Features ~

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President' Message

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Water and Power Associates, Inc. is a non profit, independent, private organization incorporated in 1971 to inform and educate its members, public officials and the general public on critical water and energy issues affecting the citizens of Los Angeles, of Southern California and of the State of California.

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He then goes on to observe that if recent dry weather in the Colorado River basin continues, “declining water levels in Lake Powell may well cut off power production at Glen Canyon Dam as early as the winter of 2015.” He also believes that a cut off would have a serious effect on power supply and pricing in the six states.

The article also notes other probable/possible problems. Less water coming into Lake Mead from Lake Powell could bring Lake Mead’s level below an intake pipe that delivers water to Las Vegas as soon as spring 2015. While there are efforts to construct a deeper intake pipe by the end of next year, could this be the end of Las Vegas as we know it? (yes I’m smiling) Mr. McKay also believes that by winter 2015, there could be a major decline in power generation at Hoover Dam and that decline would affect the supply and cost of power for Nevada, Arizona and California. He says that Southern California uses below-market-rate power from Hoover Dam to pump water to its cities and farms. He believes that if we were forced to buy market-rate electricity from elsewhere our water costs would go up. Would they? How much? Will we? What do you think?

According to Mr McKay the Southern Nevada Water Authority has called for federal disaster relief to mitigate the situation. Mr McKay suggests that such relief could go toward completing Las Vegas' new

intake pipe project, or to pay farmers to temporarily fallow their fields (to get more water in the reservoirs) or to finance a new groundwater project in the region. However, what's really at stake according to Mr McKay, besides increased power and water costs, is drinking water for 36 million Americans, irrigation water for 15% of our nation's crops and a \$26-billion recreation economy that employs a quarter of a million Americans.

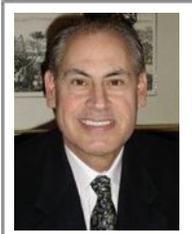
If demand on the Colorado River's water exceeds supply and according to a 2012 Bureau of Reclamation study average river flow could decrease by nearly 10% by mid-century, then continuing with a business as usual attitude such as new diversions and not improving water use efficiency will give our successors a ready target to blame.

Mr McKay also noted that the 2012 Colorado River study determined that urban and agricultural water conservation and recycling, along with market-based measures like water banking, are cost-effective measures that can lead the way to a secure water future for the Southwest. The Department of the Interior has convened a process with the seven Colorado River states and other interests to determine the next steps on water conservation and improving river flows. A report from the group should arrive next year. Let us hope it will provide some realistic answers.

As always I welcome your thoughts.

comments@waterandpower.org ■

We THANK Our Recent GUESTS



Bill Burke,
Executive Director of the John Randolph and Dora Haynes Foundation



David R. Pettijohn,
LADWP Waterworks Engineer, Water Resources Business Unit



Randall D. Neudeck,
(retired LADWP water engineer)
MWD Program Manager, Bay Delta Water Resources Management Group



Joseph M. Ramallo,
LADWP Director of Communications



Water entering the aqueduct at its northern terminus



The Terminal Structure and penstock above and alongside the new Cascades on the Los Angeles Aqueduct

Los Angeles Aqueduct Centennial 2013

Schedule of Events

(Continued from page 1)

Lauren Bon and Metabolic Studios sponsor a One Hundred Mule Train walking the Los Angeles Aqueduct - October 18-November 11, 2013

The LA Aqueduct Centennial Garden Dedication at the Mulholland Fountain (Los Feliz and Riverside Drive) - October 23, 2013

CORO Southern California Water Symposium - Celebrating 100 years of the LA Aqueduct and the Leadership Lessons that have been observed - October 24, 2013

Commemorative Civic Event and Reenactment of the Los Angeles Aqueduct Dedication (LA Aqueduct Cascades) - November 5, 2013

LA Aqueduct Cascade Reenactment Viewing and Open House (LADWP Downtown Headquarters, John Ferraro Building) - November 5, 2013

Natural History Museum Centennial Event (Free Admission Days - Natural History Museum of Los Angeles County) November 5 & 6, 2013

Opening of "Just Add Water" LA Aqueduct Commemorative Exhibit (Natural History Museum of Los Angeles County) - November 6, 2013

Be sure to take advantage of these opportunities to celebrate the accomplishments of the Los Angeles Department and Power and the role that the Los Angeles Aqueduct has played in the creation of Los Angeles as we know it. ■

WATER AND POWER ASSOCIATES, INC. VIRTUAL MUSEUM

(Continued from page 1.) The museum was put together over a two year period and utilizes select photos from a variety of image archive sources, including (LADWP, LAPL, USC, CA Image Lib, Huntington Library, Library of Congress, and many, many others.)

In addition to the museum section, our website presents a quarterly newsletter that includes articles related to Southern California water and energy issues. We also provide commentary and opinions on current Water and Energy Legislative Initiatives.

Immediately after its first release in May of 2012, the popularity of our website caught us by surprise. It seems the virtual museum was resonating with so many visitors (over 400 unique visitors a day**), not only in L.A. but throughout the world. Because of so much positive feedback, we decided to expand the museum to include other topics of interest especially as they relate to the history of Los Angeles and its surrounding area (Early Views of Hollywood, San Fernando Valley, Santa Monica, Pasadena, San Pedro/Wilmington, UCLA/USC, etc.)
(Continued on page 5)

A **virtual museum** is a [museum](#) that exists only [online](#). A virtual museum is also known as an **online museum, electronic museum, hypermuseum, digital museum, cybermuseum** or **Web museum**. The term used depends upon the backgrounds of the practitioners and researchers working in this field.

(ca. 1858)* - This is the earliest known close-up photograph of the Los Angeles Plaza. There is a square main brick reservoir in the middle of the Plaza, which was the terminus of the town's historic lifeline: the Zanja Madre ('Mother Ditch'). The reservoir was built in 1858 by the LA Water Works Company. ▼



(1863)* - View of Los Angeles' second water wheel, during Civil War days. This water wheel was built to raise water from the Los Angeles River, to the old Sainsevain Reservoir. ▼



VIRTUAL MUSEUM

(Continued from page 4) This year...we are fast approaching the 100 year anniversary of one of the most significant events in the history of L.A.– the completion of the Los Angeles Aqueduct (November 5, 1913). We've included several sections that describe the engineering marvel that brought water from Owens Valley to L.A. a century ago including: Construction of the L.A. Aqueduct, the Story of the L.A. Aqueduct, and the Opening of the L.A. Aqueduct.

(1880s)* - Horses plowing a field in the San Fernando Valley in the early 1880s. Al Redden is the foreman, viewing the teams of eight horses each. ▼



◀ (1912)* - Transportation was largely by mule power when the Los Angeles Aqueduct was under construction. This photo shows a 52-mule team hauling sections of aqueduct pipe.

(November 5, 1913)* - Crowds watch as the water gates are opened and the Los Angeles Aqueduct water starts to flow down the cascades into the San Fernando Valley. ▶



(ca. 1882)* - One of the first of seven electric street lights installed in the City of Los Angeles at Main Street and Commercial Street in 1882. It stood 150 feet tall. View is of the buildings on the east side of North Main Street at Commercial Street at near right, looking toward the Baker Block. A man can be seen standing on a platform half way up the street light mast. ▶



We've also added other sections such as Early L.A. Street Lights which includes over 100 photos showing the evolution of Los Angeles streetlights over the course of the last hundred years plus.

So, if you're interested in Los Angeles history, I invite you to come and visit, look, and explore our Mulholland-Scattergood Virtual Museum at waterandpower.org. and see some early photos that you may have never seen before. I warn you, though, once you start browsing through our museum, it will become difficult to leave for some of you history buffs. However, I assure you, the payoff will be there for you and...you will NOT be disappointed. ■

Jack J. Feldman
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Credits and References

DWP – LA Public
Library Image Archive



Power Articles
submitted by
Thomas J.
McCarthy

⚡ Shocking ⚡ Electric Issues

SCE Demands that Mitsubishi Heavy Industries Reimburse for Expenses Incurred Because of Mitsubishi's Failed San Onofre Replacement Steam Generators *SCE Spent More Than \$140 Million Investigating the Failure, Yet Mitsubishi Maintains that Just \$7.6 Million of Those Expenses Are Its Responsibility*

Rosemead, CA, October 1, 2013 - Southern California Edison (SCE) criticized Mitsubishi Heavy Industries (Mitsubishi) for “stonewalling” and made public its demand that Mitsubishi reimburse SCE for expenses incurred in responding to fundamental defects in the San Onofre replacement steam generators (RSGs) that Mitsubishi designed and manufactured. SCE’s demand follows the Sept. 23 findings from the Nuclear Regulatory Commission that Mitsubishi’s replacement steam generators failed because of a flaw in the computer code that Mitsubishi used to design and manufacture them.

According to SCE’s Sept. 27 letter to Mitsubishi, available by clicking [here](#), “Edison spent over \$140 million investigating the cause of excessive tube wear in the RSGs following a tube leak in one of the Unit 3 RSGs, plugging damaged tubes in all four RSGs, and attempting to restart Unit 2 after both Units were shut down due to the RSG defects.” SCE’s letter states that “it is simply incredible for Mitsubishi to assert that only \$7.6 million of those expenses are Mitsubishi’s responsibility.”

SCE’s letter also maintains that, although Mitsubishi claims that “it has still not received sufficient documentation to recognize its warranty obligations,” the facts

demonstrate otherwise. According to the letter, “Edison has gone well beyond its obligations to provide documentation supporting its costs,” including: documentation supporting its costs,” including:

- “Mitsubishi employees [were] present at the plant and involved in much of the activity described in these invoices”;
- “Edison has provided Mitsubishi with several thousand pages of detailed backup documents supporting the charges”;
- “Edison employees have spent hundreds of hours responding to Mitsubishi’s ongoing demands for information, including by creating specialized reports for Mitsubishi”;
- “The documentation Edison has provided far exceeds the level of detail that is customary in the industry — and far exceeds any backup that Mitsubishi has ever provided Edison in support of any charges it is claiming.”

The SCE letter concludes that “Mitsubishi’s actions have made it clear that no reasonable level of documentation will ever be sufficient

to support payment in its view. We are therefore unwilling to engage in yet another time-consuming effort, only to face continued stonewalling by Mitsubishi.”

In July, SCE filed a Notice of Dispute with Mitsubishi in an attempt to recover all damages caused by Mitsubishi’s failed design and manufacture of the San Onofre replacement steam generators that led to the shutdown of the nuclear plant. SCE has also announced that it continues to reserve all of its rights as to any and all legal remedies available against Mitsubishi. Finally, SCE has made public key documents regarding the failure of the replacement steam generators in a [Digital Document Library](#), although the Digital Library remains incomplete because of Mitsubishi’s continued refusal to permit other key documents to be made public.

About Southern California Edison

An Edison International (NYSE:EIX) company, Southern California Edison is one of the nation’s largest electric utilities, serving a population of nearly 14 million via 4.9 million customer accounts in a 50,000-square-mile service area within Central, Coastal and Southern California. ■



Carbon Technology Comes With Big Questions—And Costs

Next year the EPA will propose a rule to impose vast new anti-carbon costs on existing plants in a bid to eliminate what remains of coal power. "The target after that will be natural gas, and anything else that emits the demon carbon," writes the Wall Street Journal editorial board. "Operationally, there are going to be hangups because there are very few examples of power plants running that scale today," said Emil Salazar, market analyst at SBI. "There's not a market right now where electricity can be competitively generated using carbon capture." Meanwhile, only a few coal plants are CCS-compliant. Retrofitting them could be pricey, Salazar said.

[CNBC; Wall Street Journal \(Editorial\), Sept. 24](#) ■

Union Head Says EPA's Proposed Standards For New Power Plants 'Threaten' Economy

The head of the International Brotherhood of Electrical Workers said Monday the Environmental Protection Agency's newly proposed emission rules "threaten" economic growth and the nation's energy future. "The new rules would, in effect, stop the construction of new coal-fired power plants in the United States by enforcing emission-reduction goals that just aren't realistic using today's technology for carbon capture and sequestration," IBEW President Edwin D. Hill said in a statement.

[Legal Newslines, Sept. 24](#) ■

NV Energy Shareholders Approve Sale Of Utility To Berkshire Hathaway Unit

Shareholders of NV Energy Inc. on Wednesday approved selling the Nevada utility to Berkshire Hathaway's MidAmerican Energy utility for \$5.6 billion. "We are pleased that our shareholders have decidedly approved the merger agreement with MidAmerican. We will now turn our focus to the remaining approvals needed to complete the transaction," Michael Yackira, president and chief executive officer for NV Energy, said in a statement on Wednesday.

[Las Vegas Review-Journal, Sept. 25](#) *Tags: MidAmerican Energy Holdings Co., NV Energy* ■

September 23, Associated Press —

(California) Regulators propose to cite utility for flaw in generators at shuttered Calif. nuclear plant.

The U.S. Nuclear Regulatory Commission (NRC) stated in a report that the operator of the closed San Onofre Nuclear Generating Station near San Diego failed to identify a flawed design in four replacement generators that caused excessive tube wear and led to the permanent closure of the plant. The NRC also issued a notice of nonconformance to the designer of the generators, Mitsubishi Heavy Industries.

Source: <http://www.washingtonpost.com/business/us-nuclear-regulators-to-cite-socal-edison-mitsubishi-for-san-onofre-steam-generator-flaws/2013/09/23/0b4bd38c-245e-> ■

APS Statement Regarding the Arizona Corporation Commission Staff's Recommendation on Net Metering Reform in Arizona

Phoenix, AZ, October 1, 2013 - The Staff report makes it clear that the current net metering structure is not fair for all customers and must be changed. We can now move forward with productive discussions on the best solution for customers. The Staff report comes less than a week after the release of an important study by the California Public Utilities Commission that provides additional insight into the cost shift caused by net metering.

Staff's recommended alternatives are a starting point but don't go far enough to fix the fairness issue. We stand by our initial proposal and we look forward to working with the commissioners, staff and other stakeholders on developing the right solution for our customers. We need to act now. This issue will get worse for customers and harder to solve the longer we wait to address it. ■

Excerpts from Staff's recommendation:

"With increasing levels of DG penetration, the potential of shifting costs from customers with DG systems to those customers without such systems becomes apparent. As more customers offset a portion of their monthly bills by using energy produced by their DG systems, they purchase less energy from the utility. **Because residential rates are typically designed to recover much of the utility's fixed costs through volumetric energy rates, DG customers effectively pay less of these fixed costs.**" ■

SCE to permanently shut down San Onofre nuclear power plant

By Michael Drost

U.S. electricity grid 'highly vulnerable' to blackouts, report says

8:43 p.m. EDT, August 12, 2013
WASHINGTON—

— A decade after a vast power outage shut down the Northeast, the electricity grid remains "highly vulnerable" to blackouts because of extreme weather events fueled by climate change, a report issued Monday by the [White House](#) and the Energy Department concluded.

The Aug. 14, 2003, blackout occurred when an alarm failed in an Ohio utility control room, leading to a cascade of blackouts that affected 50 million people from Michigan to Massachusetts. But more recent power outages also have been caused by severe weather, such as storms in the East and wildfires in the West.

Between 2003 and 2012, about 679 blackouts occurred due to weather events, each affecting at least 50,000 customers. Over the same time period, weather-related outages cost the economy between \$18 billion and \$33 billion annually, depending on the number and severity of events.

"The aging nature of the grid — much of which was constructed over a period of more than one hundred years — has made Americans more susceptible to outages caused by severe weather," the report found.

The analysis of the power grid was conducted in response to a plan that President [Barack Obama](#) laid out in late June to combat climate change and better

prepare for it. Already, weather shaped by human activity has hit the United States more rapidly than had been predicted, threatening infrastructure, water supplies, crops and shorelines, according to the draft Third National Climate Assessment, a federal report last issued in 2009.

Last year, super storm [Sandy](#) knocked out power for 8.5 million customers. Strong winds from hurricanes and tornadoes are the main cause of the kind of infrastructure damage that leads to blackouts, the report said.

In Maryland, weather events including Hurricane Irene in 2011 and the June 29, 2012, derecho have prompted calls for hardening of the electricity grid. Both storms caused more than 750,000 [Baltimore Gas and Electric Co.](#) customers to lose power for an average of nearly two days, with many outages stretching up to a week.

"As these severe weather events are likely to occur more regularly in the future, it is essential that efforts to strengthen BGE's system against this potential threat accelerate and expand," the company said Monday in a statement.

Power plants, especially those that burn coal, contribute to climate change through emissions of heat-trapping carbon dioxide. Obama directed the [Environmental Protection Agency](#) to develop rules to curtail carbon dioxide released by new and existing power plants, with

the next round of proposals due in September.

But while the new report on the power grid spotlights the system's vulnerabilities and offers suggestions for improvement, it also underscores how little the administration can do to boost electricity reliability.

Most utilities are publicly traded corporations and their activities are generally regulated by the states. The Obama administration allocated \$4.5 billion for investments in energy efficiency and reliability systems, called "smart grid" technology, as part of its 2009 stimulus plan. But on a conference call to discuss the report, senior administration officials could not name other ways to drive improvement of the electricity network at a time when threats from climate change are mounting.

Asked about Monday's report, a Maryland Public Service Commission spokeswoman referred to an order regulators made in February calling on state utilities to improve reliability. The commission required utilities to submit plans to prevent or limit future weather-related outages and blackouts, and also signaled it may penalize them for "sub-standard performance" in restoring outages.

A plan BGE submitted in May called for expanding initiatives to make upgrades in areas most frequently hit with outages, more aggressively trim tree branches, and bury some power lines. ■

You Are Invited

This once-in-a-lifetime invitation is extended to all our Members courtesy of LADWP Public Affairs. There will be large screens at the JFB for viewing the ceremony at the Cascades. Plan to arrive early.





Los Angeles Department of Water & Power

L.A. Aqueduct

Centennial 2013



LADWP celebrates 100 years of continuous service of William Mulholland's engineering marvel, the Los Angeles Aqueduct.

The Aqueduct first conveyed pristine snowmelt from the Eastern Sierra to Los Angeles on November 5, 1913, which led to the growth and prosperity of Los Angeles and Southern California, helped spur an economy that today rivals many nations' and supports a distinct culture synonymous with invention, creativity and entrepreneurship.

Today, the Aqueduct continues to provide fresh drinking water to Los Angeles and will continue to do so as we enter our Next Century of Water together.

Please join your colleagues for an open house celebration with food, refreshments and a special cake to honor our local legend:

Tuesday, November 5, 2013
12 Noon
John Ferraro Building A-Level, Lobby and Bridge

Our Legacy. Our Future.

Trina modules selected for 250 MW solar project in Nevada

August 13, 2013 By PennEnergy Editorial Staff Source: Trina Solar Ltd

Trina Solar Limited (NYSE:TSL), a global leader in photovoltaic (PV) modules, solutions and services, announced it has been selected to provide 1.1 million of its high-quality PV multi-crystalline modules to the 250 MW (AC) Copper Mountain Solar 3 Project in Boulder City, Nevada. The project is owned and operated by Sempra U.S. Gas & Power (NYSE:SRG) and will be constructed by AMEC. When completed, the facility will provide

clean solar electricity to 80,000 homes for the [Los Angeles Department of Water and Power](#), and the [City of Burbank](#).

"The selection of Trina Solar for this record-breaking project is a strong endorsement of our capabilities in meeting the evolving demands of our customers in a maturing market," said Mark Mendenhall, President of Trina Solar Americas. "We look forward to completing this project and powering tens of thousands of homes with clean, reliable solar power." Trina Solar will provide 1,133,550 dual-rated, 72-cell PD14 solar modules for the project, which will be subjected to Trina Solar's rigorous factory and site testing to ensure high standards of performance and reliability. The modules will start being shipped from Q4 of this year. The project is expected to be completed in Q1 2015.

Trina Solar's selection for a project of this size and timeframe is a reflection of the Company's ability to deliver a large volume of high quality modules and to meet tight deadlines. "Trina Solar is uniquely qualified to provide solar panels to this project," said Tom Dotson, Vice President at AMEC. "Their modules' track-record of proven performance and their strong balance sheet made them an easy choice for Copper Mountain Solar 3."

Visit PennEnergy's [Renewable Generation](#) topic center to access industry focused articles and reports. ■

Decision over Utah nuclear plant in judge's hands

October 1, 2013

By PennEnergy Editorial Staff

A Utah judge will have to decide whether a proposed [nuclear power](#) plant in the state can take water from the Green River to cool its reactors. Environmentalists challenged [Blue Castle Holding's project](#), which would use 53,000 acre-feet of water annually from the waterway. State Engineer Kent Jones [previously approved the plan](#), but the plant now needs approval from Seventh District Judge George Harmond to move forward, The Associated Press reported.

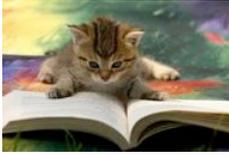
If Harmond strikes down the environmental challenge, the project plans would then go to the U.S. Nuclear Regulatory Commission for approval. The environmentalists argued the nuclear power plant would take water from the already overused Green River. The state has not conducted a review of the project to determine if the plant's water use would harm the river or environment, the AP said.

Blue Castle, however, said nuclear power development is needed as the U.S. turns away from [coal-fired power](#). The company also argued there is more than enough water in the Green River and the power plant would not significantly impact the waterway.

The water rights belong to Kane County and San Juan County in Utah. Jones approved a usage change for the plant. Blue Holding's CEO Aaron Tilton has stated he believes the judge will uphold Jones' decision and the company will be able to use Green River water.

[Nuclear power technology](#) is explored at [PennEnergy's research area](#). ■

BOOK



REVIEW

**CONFLICT ON THE RIO GRANDE:
*Water and the Law, 1879-1939,***

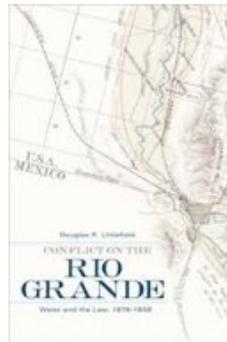
by Douglas R. Littlefield.

 Norman: University of Oklahoma Press, 2008. 299 pp.
 Maps, Illustrations, Notes, Bibliography, Index.
 Hardbound, \$39.95. www.oupres.com.

The Colorado River has long been a source of contention over the allocation of its water, a topic that historians and journalists have examined in detail. Perhaps less well known for water disputes but as litigious as the Colorado River, if not more so, the Rio Grande has experienced similar debates over control and allocation. Douglas R. Littlefield traces the complexities of the many facets of the Rio Grande. The river's users include two nations, three states (New Mexico a territory until 1912), two Mexican states, private entrepreneurs, Native Americans, and Anglo and Mexican farmers and ranchers on both sides of the river.

Although the book purportedly traces the river's troubled history from 1879 to 1939, Littlefield focuses mainly on the period 1890s-1920s. Little in the way of water law in the United States existed during this time. The situation made for lengthy lawsuits and major court decisions. Much of the contentiousness occurred between residents of the Mesilla Valley in New Mexico and the El Paso Valley. The cities of El Paso and Juarez, facing each other across the Rio Grande, favored the construction of an international dam that would promote irrigation to the benefit of agriculture in both nations. New Mexicans, however, wanted a dam built at Elephant Butte for water storage, a proposal that if done threatened the allocation of Rio Grande water to the El Paso Valley farmers and ranchers. Complicating matters even further, a consortium of mainly British investors, led by Nathan E. Boyd, formed the Rio Grande Dam and

Irrigation Company, and won a permit from Congress to construct a dam at Elephant Butte. This did not sit well with El Paso Valley residents, led by Anson Mills, who feared that such a dam would greatly restrict access to Rio Grande water not only for Texans but also Mexicans south of the river. New Mexico in turn opposed dam proposals by the State of Colorado for the Upper Rio Grande and its tributaries.



In 1904 a compromise was achieved between the different factions, though important details were left unresolved. The British investors never got their dam built; the U.S. Reclamation Service, established in 1902, built the Elephant Butte Dam. Following the compromise agreement, Congress passed a law in 1905 apportioning the river's water, and the next year worked out an agreement with Mexico. Ultimately a formal agreement, the Rio Grande Compact, was enacted in 1929, and a permanent version in 1938 that finally settled all the disputes, though in such matters nothing is left fully resolved.

It should be noted that Littlefield does not limit his narrative to a narrow focus on the river and its contestants. Where relevant he brings in the Colorado River Compact of 1922, and even Hetch Hetchy and Owens Valley are mentioned. Anyone interested in the history of Western water issues will find this book a valuable—and readable—resource, especially since at the present time the Southwest is experiencing serious drought conditions.

Abraham Hoffman teaches history at Los Angeles Valley College. His book *Mono Lake: From Dead Sea to Environmental Treasure* will be published by the University of New Mexico Press in 2014.





Mystery History



The photo above shows construction crews in cars and horse-drawn wagons in front of the City's first Water Department building. The building stood until 1939.

- a) Where was the Water Department building located? _____
- b) What year was the Water Department (later DWP) formed? _____

For answers see:

[http://waterandpower.org/museum
Mystery_History.html](http://waterandpower.org/museum/Mystery_History.html)

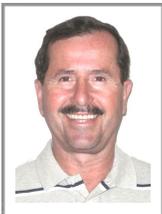
Rita Sudman Retires

Dear Friends and Supporters:

After 34 years of leading the Water Education Foundation, I have decided to step down from my position as executive director of the Foundation sometime early next year. . . . Since the Foundation has been such a huge part of my life, I am glad that the board of directors has asked me to assist in the transition and remain a senior advisor to the Foundation. I am leaving the Foundation in a solid financial position and with a strong reputation for integrity in all of its programs. *I will never lose my interest in and support of the Foundation but I look forward to new leadership working with our great staff to move our educational programs forward to reach even wider audiences.*

Statement from Bill Mills, Board President

The Foundation's many successful programs include *Western Water* magazine, water tours, conferences and public television documentaries that have reached millions of people and won numerous Emmys. Project WET (Water Education for Teachers) has been used by 16,000 teachers and reached over 15 million students in the last 15 years. From California to Australia to the Middle East and Europe, the Foundation's programs have taught millions of people about the value of water. In its last several years Foundation staff has increased their efforts to expand educating the public in a digital world with the development of *Aquafornia* and *Aquapedia*. The board of directors of the Water Education Foundation are confident this great work will continue. ■



Jack Feldman,
Webmaster,
Mystery History
Creator.



Chin Chang,
Newsletter
E.mail Editor



Carlos Solorza,
Treasurer,
Membership Chair

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