



Water Quality Staff Meet Adopt-A-School Pen Pals at Special JFB Luncheon

By Albert Rodriguez

LADWP Water Quality staff helped kick-start summer 2019 back in June for their Adopt-A-School pen pals from 75th Street Elementary School with an end-of-the-school-year celebration and luncheon. The event at the John Ferraro Building, finally allowed the pen pals to meet in person following a year of exchanging hand-written letters about their hobbies, family and friends, school work, and career goals. The program helps students develop [reading](#), writing, and social skills and also provides them with an opportunity to learn from our own in-house S.T.E.M. professionals by developing friendships and learning about careers in the water system.

LADWP employees and their student pen pals were able to get to know each other face-to-face, enjoy a meal and listen to informative presentations by Utility Services Specialist Lead, Sandra Yeh on how the Pen Pal program benefited and motivated her as a young student and another on water conservation by Anthony Tew, Civil Engineering Associate. After the meal students took part in an interactive science experiment developed by LADWP Microbiologist and Adopt-a-School program coordinator Manely Rashedan. Students learned about culturing microbes and their presence on various surfaces/objects.

“We planned all the presentation and activities in a way that would inspire our little pen pals to think about a future career in S.T.E.M. fields,” said Rashedan “Students had a wonderful time meeting their employee pen pals and loved participating in the science activity. It was quite special to them.”

75th Street Elementary School is one of 22 schools adopted by LADWP during the 2018-2019 school year. The two main components of LADWP’s Adopt-A-School initiative include the Pen Pal Program and Reading Buddies Program. Although this is the 8th year the Water Quality Division has partnered with 75th Street Elementary School, employees Department-wide have written to and inspired students at various local elementary schools since the Adopt-A-School program began back in 1984.



LADWP Headquarters Gets Charged Up

JFB Becomes Test Site for Dual Battery Pilot Project

By Carol Tucker

The northeast corner of the LADWP JFB parking lot has hosted several demonstration projects over the years, including a 200 kW fuel cell and three micro-

turbines totaling 120 kW. Recently, the site has been expanded to accommodate a battery energy storage system (BESS) pilot project that will help determine the viability of battery technology in transitioning to a clean energy future for Los Angeles.

The JFB BESS Pilot Project will “pave the way for multiple energy storage projects at the transmission and distribution levels as well as customer-owned energy storage projects,” said James Barner, Manager of Resource Planning and Development. “This project will help inform future decisions on achieving the goals of the Mayor’s Green New Deal and state mandates for reducing carbon emissions from our power generation portfolio.” Under the Green New Deal, LADWP is working to increase renewable energy to 55% by 2025, 80% by 2036, and 100% by 2045 and reducing greenhouse gas emissions from its power portfolio.

“It’s important that we gain a better understanding of all available energy storage technologies to meet our goals,” said Electrical Engineer Matt Hone, who heads the Power System’s energy storage and new technologies group. Once the test period is concluded, the JFB BESS will be used for a variety of energy applications, such as shaving energy use during peak periods, and remote energy monitoring and control.

The project has involved installing two types of battery energy storage technologies side by side, and connecting them to LADWP’s headquarters building. One is a 100 kW, 4-hour lithium-ion battery and the other is a 100 kW, 4-hour vanadium redox flow battery.

With installation nearly complete, the project will undergo a series of tests before being placed into service prior to the end of the year. Subsequently, LADWP will partner with the Electric Power Research Institute (EPRI) for a one-year pilot study. The study will evaluate and gain insights regarding the performance, operation and feasibility of these two types of battery technology as well as provide training for LADWP staff. Other goals are to help LADWP transition to a more resilient electric power system, and ensure that the most up-to-date operational and safety standards are incorporated.

Lithium-ion batteries are the more popular type of battery technology, commonly used in cell phones and also widely used in electric and hybrid vehicles. LADWP has already gained experience with lithium-ion batteries at the Beacon Energy Storage System in the Mojave Desert. Flow batteries are not widely used by electric utilities but offer a lot of potential advantages for energy storage, such as improved safety, increased charging capacity and longer duration capability. Flow batteries use liquid electrolyte stored in external tanks rather than in each battery cell.

Arevik Petrosyan, Associate Electrical Engineer and Project Manager along with Hone, said the two-year initiative has been a team effort including staff from Power Engineering and Construction, Architecture and Drafting, Fire Protection, Supply Chain, and Information Technology Services to address various issues including those related to cyber security. LADWP construction forces did all site preparation work, such as foundation expansion, conduit and ground grid installation, transformer, switch gear and other interconnection equipment. The contractor, Doosan GridTech /KTY Engineering, has been tasked with procuring, installing, integrating, and testing and commissioning both battery systems.



Tapping Into Excellence

Water System Employees Take Part in Annual Competition

By Albert Rodriguez

It was non-stop action as the best-of-the-best in LADWP's Water System showcased their skills and talents during the exciting 9th Annual Sylmar WEST Tap Off competition on February 20. The annual competition brought in teams of water utility workers from LADWP's Water Distribution Division district yards and other local water utilities to show off their skill in various water-related events.

Teams squared off in colorfully named, but technically difficult events, such as Pipe Tapping, Hydrant Hysteria, Hot Flare and Meter Madness. This year's Tap-off event also featured a Safety Fair put on by Water Distribution Division Safety with vendors and water utility product exhibitions

The main Pipe Tappers competition entails a three-person crew drilling a hole and installing a valve into pressurized cement-lined, ductile iron pipe using a heavy, hand-cranked tapping machine. Copper service lines are then quickly attached and run to a service meter all in about two minutes all while avoiding leaks as much as possible. The winning LADWP team this year was the "LA Tappers" of Trunk Line Construction featuring Jose Campos, Sr. Water Utility Worker; Mark Winkler, Water Utility Worker; Nick Castruita, Water Utility Supervisor and Coach Joey A. Castruita Jr. Water Utility Supervisor.

"We normally would use modern pneumatic machines, but if those go down out in the field, it's important to maintain these skills," said Tommy Gibbs, Water Utility Supervisor, Central District. "The competition brings us together. It's good training and great for moral."

The Hydrant Hysteria competition entails assembling a fire hydrant that is broken down into separate components and re-assembled as quickly as possible. The winning team was "Western Hydro Kings" from Western District comprised of Luis E. Zamudio, Water Utility Worker - Christopher Torres, Maintenance Construction Helper and Coach Cesar Barragan, Sr. Water Utility Worker.

The Meter Madness competition featured water utility workers putting together a water service meter from a bucket of parts. Winner of this event was Angus L. Hall, Maintenance Construction Helper of Western District.

In the Hot Flare competition, participants must skillfully remove a water meter from

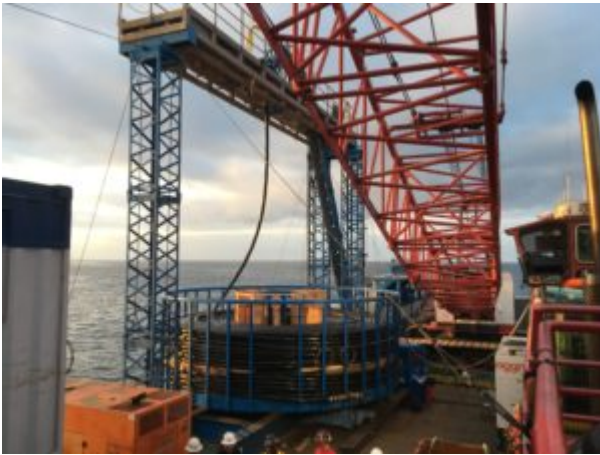
a pressurized water service line, cut the pipe, hammer in a new valve, shut it off and then install a new water meter, all while icy-cold water is splashing around. Their movements must be efficient and precise in order to minimize water loss and install a properly functioning meter. The winner of Hot Flare this year was Alan S. Verdi Maintenance Construction Helper and Justice Baldwin Water Utility Worker of West Valley District.



Justice Baldwin flares copper as he strikes an opening into a copper pipe.

“It’s important that our crews stay at the top of their skill set with events like this, especially during leak season,” said Donald Williams, Western District Superintendent. “Colder weather and colder water coming into the distribution system along with older infrastructure can keep our crews really busy during this time of year.”

The LA Tappers went on to take first place at the regional competition in Sacramento on March 27th vaulting them to the AWWA ACE19 national competition in Denver, CO June 10-12. LA Tappers were in the lead for most of qualifying rounds until being bumped out of finals in the last afternoon session by Birmingham, Alabama Water Works “Bama Boys” who went on to take 1st place. Undaunted, LA Tappers hope to return next year for what promises to be another tough, but exciting competition.



Improving Power Reliability by Land and Sea

By Paola Adler

The last leg of a power reliability project to strengthen an essential transmission line connecting the Pacific Northwest to Southern California has been completed. Spearheaded by LADWP’s Power Transmission and Distribution Division’s Overhead/Underground Transmission team, the Pacific Direct Current Intertie (PDCI) ground return system’s ocean electrode was upgraded to improve power reliability and capacity for Los Angeles customers and other utilities that utilize the line.

The PDCI is a DC transmission system that has a capacity of 3,220 MW, enough to

power two million homes. The original system was put in service in 1970 and has been continually maintained and expanded, but the southern ground return connection had not been replaced since the PDCI was built.

Originating at Sylmar Converter Station and terminating in Santa Monica Bay, the ground return system is designed to carry current safely when the PDCI experiences an interruption and also ensures consistent flow of electricity. The ocean electrode component provides a “ground point” where electricity can travel through the earth. As the operating agent of the system’s southern area, LADWP began a project to inspect and upgrade this portion of the line in 2014.

“This project was a unique challenge for LADWP because it included replacing both underground cable on land and submarine cable under 120 feet of water in the Pacific Ocean,” said Mohammad Khajavi, Power System electrical engineer and the project’s director. “There were a lot of technical challenges and moving parts we had to manage, but our biggest achievement is creating a team that worked well together to achieve a complete project at a cost lower than expected.”

Because the cables stretch more than four miles offshore, a barge and tugboats were used to carry equipment and work crews, and ocean divers were used to help properly install components underwater. LADWP used DC cross-linked polyethylene insulated cable for the project and installed 36 offshore vaults, using a design that exceeds safety standards and protects marine life and customers onshore.

More than 50 LADWP employees worked on the project, which was commissioned in November 2018. Divisions beyond the Power System also contributed to the project’s success through environmental monitoring and compliance, permitting and public outreach. The team’s efforts will help support reliable power flow to Angelenos for decades to come.



The project included replacing both underground cable on land and submarine cable under 120 feet of water in the Pacific Ocean. (Photo by Jairo Guerrero)



Birders Flock to 2019 Owens Lake Bird Festival

By Sylvia Beltran

Nearly 170 bird watchers and nature enthusiasts descended on the town of Lone Pine, California, April 26-28 to participate in the 5th Annual Owens Lake Bird Festival. The three-day event, sponsored by Friends of Inyo, LADWP and others, brought outdoor enthusiasts together for this popular event. Birders, as they fondly refer to themselves, participated in numerous outings onto Owens Lake and excursions to other areas around Lone Pine to view birds, wildflowers, geologic and historical features.

As the early morning sun rose over the Inyo Mountains to the east of Owens Lake, several groups of birders traveled onto the lake stopping to eagerly set up their spotting scopes to view birds from a distance. Birds could be found playfully scurrying on the shorelines, foraging for food or flying in for a restful stop as they migrated to their summer home. Mild temperatures in the mornings made bird watching more comfortable. As the weather warmed in the afternoon, it didn't stop birders from heading back to the lake to try and spot other birds and maybe catch a peek of the cryptic Snowy Plover.

The Snowy Plover, which nests during this time of year on the playa of Owens Lake, is classified as a species of special concern, which limits the proximity of humans and equipment to their nests. Other birds found on the lake during the festival included the Western and Least Sandpiper, American Avocet, Northern Shoveler, American Wigeon, Gadwall, Mallard and other water birds.

Juanita Smith-Nokao was a first-time birder. Born in Bishop, Calif., Juanita moved away for college and upon graduation, she moved to Japan to teach mathematics. She later moved to Monterey, Calif., where she continued teaching until her recent retirement. Once retired, Juanita moved to Lone Pine. She was never a birder, but wanted to understand how others could be attracted to the activity. Her initial interest was sparked while teaching in Monterey where she observed that ravens

were astute enough to learn the school bell schedule. They would swoop down onto the grounds where crumbs had fallen after snack and lunch period. Now that she lives in Lone Pine and the bird festival is in her back yard, she wanted to participate in the event. She made new friends - both human and winged - and stated she would attend next year's festival.



Juanita Smith-Nokao using her binoculars to view the birds from a distance on Owens Lake.

Jay Carroll, a retired marine biologist from Morro Bay, Calif., finds birding appealing. Jay described the appeal as a free peek into nature and how birds behave, an opportunity to study birds' feather colors and markings while enjoying the outdoors and nature. At this year's bird festival, Jay focused on the migrating birds like the Western Sandpiper, American Avocet, Northern Pintail and others.

The Owens Lake Bird Festival has grown in popularity and participation since it began in 2014. Participants come from various parts of California, including San Diego, Mammoth Lakes, the Bay Area and from Nevada. LADWP employees provide support for the annual event and lead groups onto Owens Lake for their bird watching enjoyment.

LADWP began the largest dust mitigation efforts in the United States at Owens Lake in 2000. Since the efforts began, the exposed lakebed has been transformed into a

haven for migratory birds and other wildlife. The lakebed has a myriad of mitigation measures including shallow flooding, native vegetation, gravel and tillage to abate harmful dust from blowing off the dry lakebed.

Learn more about [LADWP's environmental work at Owens Lake.](#)



LADWP Hits a Home Run with Dodgers Fans

By Paola Adler

Communications, Media and Community Affairs

Few organizations are more iconic in our city than the Los Angeles Dodgers. And when the boys in blue are playing, Angelenos are watching. By partnering with the Los Angeles Dodgers Foundation (LADF), the team's official charity, LADWP has found new avenues to educate, inform and give back to our customers and local communities.

LADWP's partnership with LADF has allowed the Department to promote our message of water conservation and energy efficiency through new and exciting customer-facing interactions. In 2018, LADWP expanded that partnership to support several local events benefiting underserved youth across Los Angeles. The

partnership allows LADWP to share important information directly with our customers and communities about the service and value we provide.



A young Dodger fan enjoys clean, refreshing water from the tap.

At two recent LADF events, the RBI Playerfest in June and the unveiling of a new Dodger Dreamfield in September in South Los Angeles, thousands of youth and their parents from across Los Angeles were served pure, clean, refreshing tap water directly from the LADWP water trailer.

With a commitment from LADF to build more fields, LADWP plans to be an integral partner alongside other municipal agencies, including Recreation and Parks, to partner on various beneficial projects at locations where Dodger Dreamfields can also be built, bringing added value to our customers.

Also in September, employees brought LADWP's sponsorship of the Biofreeze Los Angeles Dodgers Foundation 5K/10K to the next level.

A group of LADWP employees swapped out their work shoes for running shoes to participate in the race, wearing lime green shirts to promote LADWP's electric vehicle programs, making them easy to spot in the sea of 11,000 runners wearing Dodger blue. The event also featured LADWP's water trailer, which helped to keep

thirsty runners hydrated.

A Learning Opportunity

In addition to connecting with Dodgers fans at local events, LADWP also had a unique opportunity to turn a local power outage into an important teaching moment for customers throughout the city. When a mylar balloon hit a power line at Dodger Stadium during a game on the night of July 30, 2018, power flow to the venue was interrupted for two seconds, causing the game to be delayed for 20 minutes in order to reset equipment and lighting.

The Department worked in close coordination with Dodgers staff and stadium personnel to ensure power was restored quickly and safely. Many watching the game wondered why the power had gone out. LADWP was quick to respond to inquiries via social media and our newsroom, utilizing the outage as an opportunity to educate customers about the danger of mylar balloons, which cause 150 outages per year on average in the city. Turning a negative into a positive, many customers became better informed, helping to raise awareness about the serious impacts of mylar balloons on electrical equipment and helping protect the power grid.



LADWP's water trailer makes a splash at the 5k/10k Dodger

Foundation run.

LADWP hopes to continue to foster this connection with Dodgers fans in the future, and is planning to participate in several events in 2019. Stay tuned!



LADWP Helps Dry Cleaner Save Big on Electric Bill

By Carol Tucker
Communications, Media and Community Affairs

How did the owner of a West Los Angeles cleaning business reduce his electricity bill by 30 to 40 percent without spending a dime? Simple—he let LADWP do the work for him.

“After LADWP came and changed all the lights, my electricity went down 30 to 40 percent,” said Tang Pham, owner of V.I.P. Cleaners on Sepulveda Boulevard. “I’m so happy. I urge all business to do this. It worked out beautifully, and I didn’t pay anything out of my pocket.”

Nearly 21,000 businesses have benefited from free energy and water efficiency

upgrades since 2012 thanks to LADWP's Commercial Direct Install (CDI) program. Located throughout Los Angeles, these customers include mom and pop grocery stores, retail shops, mid-size businesses, warehouses, charter schools, churches, and apartment complexes. The amount of energy savings being achieved is estimated at over 237.7 gigawatt-hours per year—equivalent to removing about 39,600 homes from the grid or reducing greenhouse gas emissions by about 89,960 metric tons per year.

“LADWP has made great strides in energy efficiency, tripling the amount of energy our customers save over the last few years,” said David H. Wright, LADWP general manager. “We plan to continue building on that success with new and enhanced programs designed to reach more customers and make it easier for customers to participate.”

The CDI Program is available to any business or other non-residential customers whose average monthly electrical demand is 250 kilowatts (kW) or less. Some of the energy and water saving upgrades available include energy efficient lighting systems, LED exit signs, low-flow water devices, pre-rinse spray valves and other measures.

The program was first introduced by LADWP as the Small Business Direct Install (SBDI) Program for businesses with an average electricity demand of 30 kW or less. It was relaunched in 2012 to encompass small businesses and non-residential customers, such as churches, schools, neighborhood markets, retail shops and small multi-family residential housing. In 2016, LADWP began offering the program for mid-size and larger businesses and other non-residential customers using up to 200 kW. In January, LADWP raised the qualifications to non-residential customers using 250 kW per month to further increase energy and water savings throughout the city.

The program is one of LADWP's key strategies for transitioning to 100 percent clean energy and meeting city and state goals and mandates for reducing greenhouse gas emissions. LADWP's energy efficiency goal is to reduce energy use by 15 percent from 2017 through 2027. That represents a cumulative energy savings of nearly 26 percent since 2010.