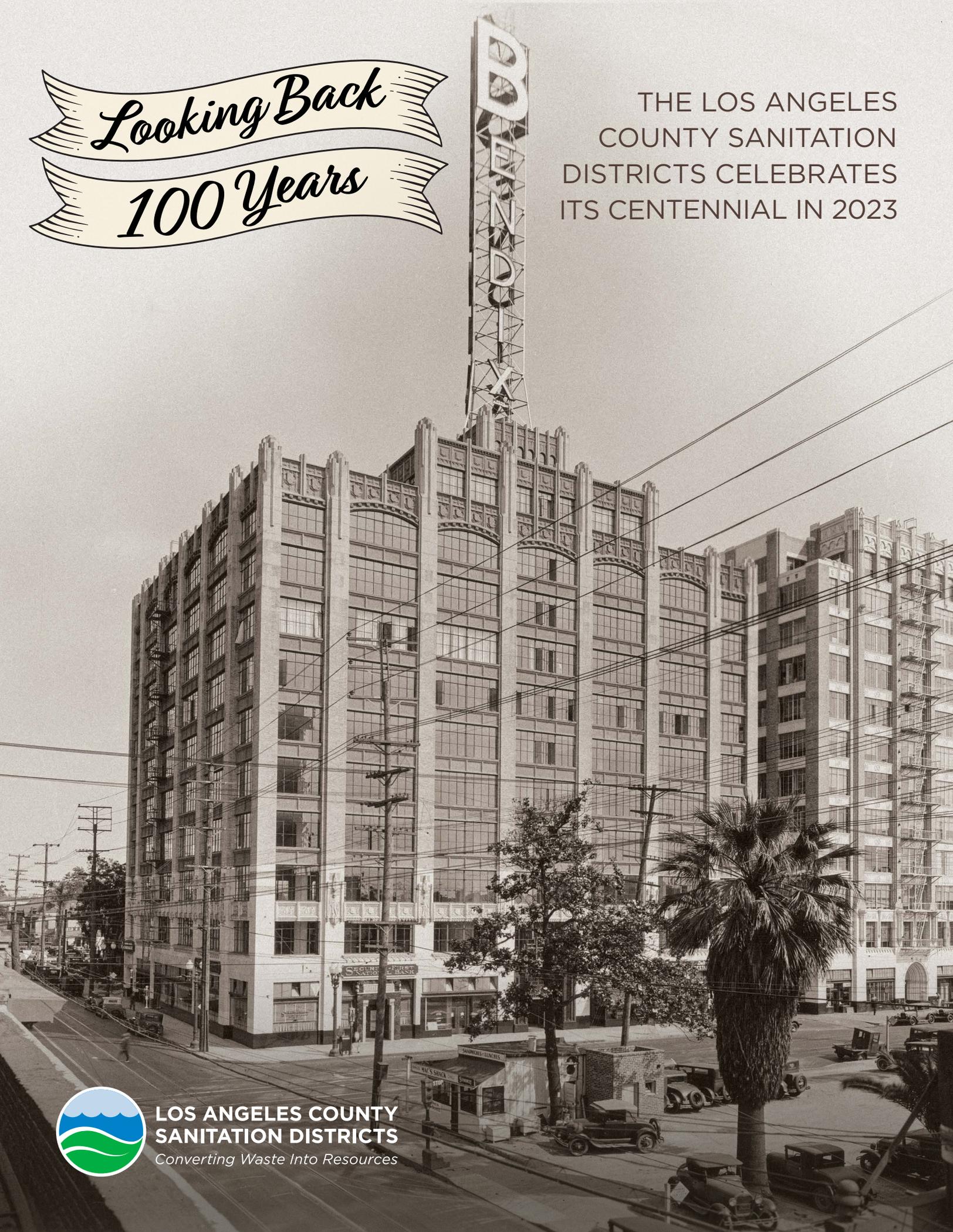


Looking Back
100 Years

THE LOS ANGELES
COUNTY SANITATION
DISTRICTS CELEBRATES
ITS CENTENNIAL IN 2023



**LOS ANGELES COUNTY
SANITATION DISTRICTS**
Converting Waste Into Resources

Looking Back 100 Years

2023 marks the Los Angeles County Sanitation Districts' 100-year anniversary. This is a year to reflect on how the agency has contributed to the people of LA County. This is also a time for Sanitation Districts staff to be inspired by the agency's past as new challenges are tackled.

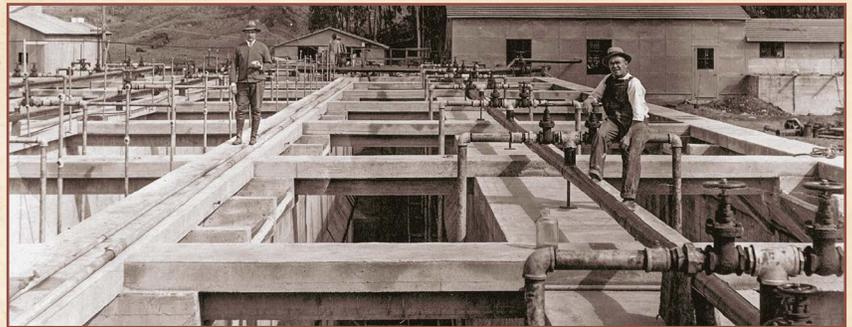


FORMATION OF THE SANITATION DISTRICTS

The concept of the Los Angeles County Sanitation Districts originated in the minds of **Albert Kendall Warren**, Assemblymember Hugh Pomeroy, and County Board of Supervisors Chair R.F. McClellen. Mr. Warren developed the plan for a regional sewer system to serve Los Angeles County and was our first chief engineer. In September 1925, the agency broke ground on its first trunk sewer, the Wright Road Trunk Sewer, just north of Maywood. Our sewer system has grown to include over 1,400 miles of trunk sewer throughout the county. The ceremonial shovel in the photo is kept in the Chief Engineer's office.

OUR FIRST WASTEWATER TREATMENT PLANT

The Joint Disposal Plant (JDP) began operation on February 4, 1928, processing two million gallons per day (mgd) of sewage. The flow into the plant increased to about 10 mgd in its first two years of operation and to 22 mgd by 1937. Our Joint Water Pollution Control Plant is located on the site of the old JDP.



PIONEERING WATER RECYCLING

A 1949 Sanitation Districts' report on Water Reuse led to construction of several inland water reclamation plants to produce recycled water close to where water was needed. The first of these plants, the Whittier Narrows Water Reclamation Plant, has been supplying high-quality recycled water for groundwater replenishment since 1962 and was designated a historic civil engineering landmark in 1972 by the American Society of Civil Engineers, L.A. Section. By 2022, the Sanitation Districts had produced over 1.2 trillion gallons of water that were beneficially reused.



SUPPORTING COUNTY SOLID WASTE NEEDS

The act that created our agency, the County Sanitation District Act, was amended in 1949 to enable the Sanitation Districts to manage solid waste. Between 1957 and 1961, the Sanitation Districts and Los Angeles County acquired five landfills that the Sanitation Districts operated. In 1971, we added the Puente Hills Landfill, which became one of the nation's largest sanitary landfills and a showcase for innovative environmental control systems and good-neighbor measures.

RAISING THE BAR FOR LANDFILLS

As the LA County population surged, homes encroached on landfills, requiring improved practices to ensure that we remained good neighbors. The environmental movement of the late 1960s and early 1970s and the energy shortage in the early 1970s also drove landfill innovation. The Sanitation Districts were pioneers in collecting landfill gas and converting that gas into green energy. Other innovations that the Sanitation Districts helped develop include groundwater protection barriers, landfill liners, visual berms, bird wires, and reuse of green waste and asphalt.



HARNESSING LANDFILL GAS

In 1971, The Sanitation Districts used gas from the Palos Verdes Landfill to run a generator and power a Christmas tree. This event received extensive media coverage—including a visit from then Prince Charles—and raised awareness of renewable energy. In 1987, the Sanitation Districts started operation of the Puente Hills Gas to Energy Facility. At its peak, this facility converted gas from the Puente Hills Landfill into enough electricity for 50,000 homes. Our agency has many other renewable energy projects that collectively produce more power than our agency uses. Extra energy is exported to the power grid, which reduces the power that energy providers must produce and thereby reduces greenhouse gas emissions.

HELPING MEET RECYCLING MANDATES

California's AB 939 required 50% of solid waste to be diverted from landfills. To help our member cities comply with this law, the Sanitation Districts pioneered the beneficial use of green waste instead of soil to cover trash at landfills. To separate recyclables like paper, aluminum and plastic from trash, the Sanitation Districts purchased the Downey Area Recycling and Transfer (DART) facility in 1999 and completed construction of the Puente Hills Materials Recovery Facility (MRF) in 2005.





SEWER MANAGEMENT

As regulations governing sewer discharge from industry strengthened in the 1970s and 1980s, less heavy metals were discharged to the sewers. This change enabled growth of bacteria that created sulfuric acid in the top (crown) of the sewer, leading to corrosion of concrete sewers. In the 1990s, the Sanitation Districts responded with a massive rehabilitation of over 100 miles of sewer, much of which was done using sliplining or cured-in-place pipe (CIPP). We also responded with innovations to our maintenance program with scheduled video inspections and spraying the crown of sewers to limit acid formation. These efforts have slowed the need for rehabilitation and helped protect against sewer failures.

WATER RECYCLING IN THE ANTELOPE VALLEY

The Lancaster and Palmdale Water Reclamation Plants face an unusual challenge—they are located in a closed hydrologic basin (i.e., where rivers do not flow to the ocean). With large population growth and a very arid environment, water supply is a challenge for this region. In 2011, the Palmdale plant was upgraded to provide tertiary treatment, followed by the Lancaster plant in 2012. The resulting high-quality recycled water is available to meet municipal water needs with remaining water being used to grow crops. These projects also included large reservoirs to store water in the winter for high summer demands.



NUTRIENT RECYCLING

For decades, we have been leaders in the recycling of biosolids, the nutrient-rich byproduct of wastewater treatment. Initially, biosolids were converted to compost at the JWPCP. As the community encroached on the JWPCP, biosolids management moved offsite to locations in California and Arizona. In the 2000s, we partnered with the Inland Empire Utilities Agency to build a state-of-the-art, fully enclosed composting facility in Rancho Cucamonga (the Inland Empire Regional Composting Facility). Later, we developed Tulare Lake Compost near Kettleman City in California's Central Valley. Both facilities utilize innovative practices to create exceptional quality compost. This compost is an environmentally friendly way to recycle nutrients and improve soil for gardening and farming.



CONVERTING FOOD WASTE INTO GREEN ENERGY

Food waste accounts for half of the organic waste that is disposed as trash. In 2016, California passed laws requiring cities to divert organic waste from landfills. To help our member cities comply with these requirements, the Sanitation Districts developed a food waste recycling program that primarily uses existing solid waste and wastewater facilities to produce green energy and nutrient-rich material that is converted into compost.

CLEARWATER PROJECT

A key part of our wastewater infrastructure is two tunnels that carry treated water six miles from the JWPCP, our largest treatment plant, to the ocean. These tunnels are over 60 and 80 years old and cannot be removed from service for inspection or repair. In 2019, after years of planning and environmental review, we began construction of the Clearwater Project. Utilizing a modern tunnel boring machine, the project will build a new 7-mile long, 18-foot internal diameter tunnel that will replace the two existing tunnels and safely discharge the JWPCP’s clean water to existing ocean outfalls located at Royal Palms Beach in San Pedro. The Clearwater Project is scheduled for completion in 2027.



IMPROVING OUR WATER RELIABILITY

Since 1962, the Sanitation Districts have been the nation’s leading recycled water producer and now recycle nearly all the water from ten of its eleven plants. The eleventh plant, JWPCP, receives wastewater that is too salty to reuse without advanced treatment. The Metropolitan Water District of Southern California and the Sanitation Districts have partnered on the Pure Water Southern California Program. As envisioned, this program would purify the treated water from the JWPCP using advanced treatment like reverse osmosis and ultraviolet (UV) light disinfection. At full scale, the project could produce up to 150 million gallons of purified water each day, enough to serve 1.5 million people. This water would be used to replenish groundwater basins and improve water supply reliability for Southern California.

“Only time will tell how well we, who have been given the privilege of carrying on, will meet the challenge. Certainly, the opportunity is all that we can ask.”

John D. Parkhurst, Chief Engineer, 1961–1978.

“Public service is a high calling with high expectations.”

Grace Robinson Hyde, Chief Engineer, 2012–2019.