

# History Comes Alive!

Tales From the City Archives



by Hynda Rudd,  
City Archivist (Retired),  
and Club Member

## ■ Here's a first look at a publication detailing the history of the Los Angeles City sewer system.

In October, the John Randolph Haynes and Dora Haynes Foundation awarded a grant to the Los Angeles City Historical Society to create a publication to detail the history of the Los Angeles City sewer system. The book, titled *Underneath the City of Los Angeles: A History of the Los Angeles City Sewer System, 1850-2005*, is being written by Anna Sklar, the Public Relations Director for the Board of Public Works from 1983 to 1987. Following that, she was Public Relations Director for the Bureau of Sanitation in Public Works. Many aspects of her book were found in the Los Angeles City Archives. The following are excerpts from her incredible work in progress. First, an abbreviated history of the City's sewer system, and then a more general overview:

■ **The First Sewer to the Sea:** The first population boom in Los Angeles history occurred in 1885. An American town of 11,000 inhabitants in 1880 had grown to 65,000 in less than seven years and grappled with a conundrum - sell their sewage or send it by pipe to the ocean. City Engineer Fred Eaton drew up a sewerage plan for the interior of the City with an outfall to the ocean, 12 miles southwest of the City. The City Council dithered; residents and politicians debated the plan. The debate spanned five years before the residents agreed to construction of the outfall. Construction of the Dockweiler Sewer was completed in 1904.

■ **Suicide or Accident:** Within a few years, the first sewer to the sea began leaking and could not carry the effluvia from 102,479 people. Reform was in the air. Contractors reneged and walked off the job. A conscientious engineer dies; was it suicide or accident?

■ **The Roaring Twenties:** The population soared. The motion picture industry caused sewage overflows in the streets of Los Angeles and the new central outfall would not hold. Residents refused to approve bond measures that would pay for building a new sewer outfall and treatment plant. Finally on the fourth try, with sewage in backyards and basements, a sewer relief measure was approved. The beaches become awash in fecal matter, but no one seemed to mind. Finally, when portions of the City were once again swimming in sewage, the residents pleaded for relief.

■ **The North Outfall Sewer:** When there was not enough money for a treatment plant, the City decided to build a sewage pier or two to bring all the City's sewage through the longest sewer outfall in the United States to the plants and piers.

■ **Aldrich the Survivor:** Lloyd Aldrich became the City's 16th City Engineer and held office (1933 © 55) longer than any engineer before him or since. He designed freeways that accommodated the automobile and ended light rail transportation in Los Angeles. He oversaw all depression era Workers Progress Administration funds in Los Angeles. Most was spent on civic improvements. Several million went to moving sand at Hyperion. Aldrich wanted to build one treatment plant to handle all the City's sewage. The California Health Department released the first report on pollution in Santa Monica Bay: A powerful indictment of the City's lackluster attempts to take care of its sewage, the report spurred a reform movement to clean up the bay.

■ **Happy Days Are Here Again:** The Hyperion Waste Activated Treatment Plant was designed, built and completed in 1952. The plant was designed to handle the City's sewage well into the 21st century. Within

three years, Hyperion could not handle the enormous amount of water pouring in. The North Outfall Sewer was overwhelmed by development and subdivision in the San Fernando Valley. Sewage trucks were parked on top of manholes as sewage pours into the Los Angeles River.

■ **Clean Enough Is Good Enough:** Treatment at Hyperion was converted to primary and partial secondary to maintain some level of purification of the sewage now rushing in to the plant. The beach communities protested the reduced treatment, and the State and Regional Water Quality Control Boards disagreed on a sewage discharge permit for Los Angeles. A new sludge line was built to discharge hundreds of tons of sludge a day into an ocean cavern. The Valley Interceptor System was the start of an ever-growing system to manage the City's growth and development.

■ **The Clean Water Act:** A new City engineer, Donald C. Tillman, took on the federal government. His vision of an environmentally friendly sewage treatment plant in the Sepulveda Basin ran into opposition from the Environmental Protection Agency, which wanted the City to stop dumping sludge in the ocean. The money to build the Sepulveda Basin plant was to be made available only if EPA guidelines were met. Tillman protested and local politicians joined the Pacific Legal Foundation in a suit against the EPA. The EPA, in turn, sued Los Angeles. Amendments to the Clean Water Act allowed cities including Los Angeles to apply for waivers from full secondary treatment. The City of Los Angeles, Orange County, and Los Angeles County began a study to decide what to do with sludge from sewage. Four years later in 1980, the city signed a consent decree to get sludge out of the ocean. The money for the water reclamation plant was released. The City began its battle to not provide full secondary treatment.

■ **Ballona Creek:** Sewage overflowed in the winter, spring, fall and summer. L.A.'s sewage woes made international news. DDT and PCBs were found in fish. Ballona Creek became polluted. Environmentalists organized. Sepulveda Basin water reclamation plant went on line. The City was fined \$180,000 for sewer spills. The EPA, the State of California and the City signed a consent decree agreeing that the City would stop dumping sludge in the ocean by December 1987 and construct full secondary facilities by 1998.

■ **Hyperion:** The Hyperion Energy Recovery System (HERS), first of its kind, was commissioned, and de-bugging began. More sewage spills occurred. Mayor Tom Bradley fought back. The State of California filed more suits against the City. More spills occurred. The city of El Segundo fought back. The City stopped dumping sludge in the ocean. Water conservation and sewer limitation ordinances were approved. What to do with the sludge? Plans for shipping it to Guatemala went awry. Sludge alternatives were developed. Storm drain runoff was discovered to be a villain in pollution of Ballona Creek.

■ **Reclaiming the Waste:** The City began a diversified sludge-out program: Some went to create energy to run the treatment plant; some went to Arizona for direct land application; and some went to the San Joaquin Valley, where the sludge was mixed with city tree waste and lawn clippings to make compost, eventually to be sold back to Los Angeles residents. Five decades after sanitary engineers at the DWP successfully completed the first Los Angeles sewage water reclamation project, the DWP announced a new planned use of reclaimed water.

■ **Success at Last:** The City bought a \$5.7 million research boat to take water, fish, and ocean bed samples. The boat cost \$4.5 mil-

# Underneath Los Angeles

lion more than anticipated. Beginning in 1990, interim improvements at the Hyperion Treatment Plant were successful. Plant performance went from among the worst in the nation to the best. In 1991 the problem of sewage spills and overflows was finally relieved when the North Outfall Relief Sewer was built. The East Central Interceptor Sewer - 80 to 120 feet deep - was completed in 2004. In 2005 the Northeast Interceptor Sewer was completed. Los Angeles finally enjoys a full secondary treatment plant, but the old sewers, leaking and failing, are to undergo a massive rehabilitation program into the 21st century.

The Los Angeles Department of Public Works has several bureaus, employing several thousand individuals. They pave our roads, design and construct our streets, repair them when necessary; trim the trees; clean empty lots; and design, construct, maintain and repair sewers and four wastewater treatment plants. The plants include the Los Angeles-Glendale Treatment Plant, the Donald C. Tillman Water Reclamation Plant, the Hyperion Treatment Plant (all of which constitute the Hyperion system, which will be studied and analyzed in this book) and the Terminal Island Treatment Plant, which serves only Wilmington and San Pedro. To date, no complete history has been written about the Hyperion system.



Anna Sklar, author of an upcoming book on the history of the City's sewer system.

Hundreds of years before Christ was born, ancient Babylonians and, later, the Romans built and maintained excellent sanitation facilities, including an efficient sewage disposal system that relied on gravity to remove the waste from the city, though not connected to homes. During the 15th century, cesspools were the primary repository for household waste. In Paris, cesspools often leaked, and the solid waste was removed by street sweepers and cesspool cleaners, who brought their refuse to dumps located throughout the city. It wasn't until the early 19th century that enclosed, oval sewers were built, emptying their waterborne waste into rivers and streams including the Seine in Paris and the Thames in London.

Construction of crude, open wood sewers of Los Angeles was begun as early as the 1850s. Later sewers constructed beginning in 1894 employed newer techniques. Engineers used mathematical formulas including gravity, rate and amount of flow, and discovered better materials including brick, vitreous clay and concrete. The sewers of Los Angeles have always been separate from the stormwater drains, a setup unlike many other sewer systems that include both rainwater, gutter runoff and sewage. Unlike the freeways that often

separate people and are congested and dreaded by the millions who use them every day, sewers frequently get congested, but are more often out of sight and out of mind. Underneath the freeways and roads are more than 6,500 miles of sewers. They connect people, homes and industry to the cities where they live. These sewers collect the wastewater from far-flung communities - west San Fernando Valley through Burbank, to East Los Angeles, Boyle Heights, twisting and turning like mammoth snakes - to Beverly Hills, West Hollywood, and finally, delivering their burden to the Hyperion Treatment Plant on the oceanfront, at the intersection of Imperial Highway and Vista del Mar in Playa del Rey. More than 6,500 miles of sewers discharge and treat the wastewater from more than four million people.

Upstream plants including L.A. Glendale and the Tillman Water Reclamation Plant send their sludge to big daddy Hyperion, while the treated wastewater is used for irrigating freeway medians, providing water for recreational lakes and irrigation for parts of Griffith Park. The unused treated wastewater is then discharged into the Los Angeles River.

Combined, these plants treat approximately 420 million gallons a day. Maligned by many, ignored by many more, the City's sewer lines are today being cleaned and repaired, while the Hyperion Treatment Plant stands as a model of environmental success reached in the mid-1990s. In 2000 the plant received the American Public Works Association Award for being one of the Top Ten Public Works Projects of the last century. As Los Angeles today undertakes a massive rehabilitation of its oldest sewer lines, federal and state fines for sewage spills are a reminder of a ruptured past. Much like the City itself, the sewer system has grown in spurts of activity, mirroring the housing booms in the City, from the late 1880s to the present day.

*The Club thanks Anna Sklar for her permission to run this excerpt from her forthcoming book. Readers: Anna asks that readers who have information about the L.A. City sewer system to please contact her at sewers@dslextreme.com. Please do not send attachments.*

