



Alive!



SERVING OVER
18,000 CITY AND
DWP EMPLOYEES

Club Store to Move Closer to Where You Work

■ **BIG CLUB NEWS:**
The Club Store and other services are moving within walking distance of thousands who work downtown.

THE CLUB — In its boldest customer service move yet, the Club is moving its Store and other people-to-people services to a better location downtown.

The new Club Store and satellite offices will be at 120 W. Second St., between Spring and Main Streets, near the LAPD's new Parker Center and Transportation's headquarters in the Caltrans Building. And for perhaps thousands of other Club Members who work downtown, the new location will be an easy walk.

"For more than 80 years, the Club has been there for you, our Members," said John Hawkins, Club CEO. "And now, we're even more *there!*"

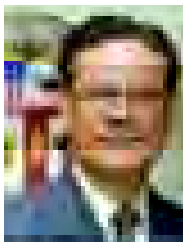
"Our Members asked for better access, and we gave you a great Website, which is going gang-busters," he continued. "That same customer service continues with this new space. You're gonna love it!"

"What better way to celebrate the lives of City Employees, than to make it easier for you to get the things you need – insurance, tickets and merchandise?" said Navin Cotton, the Club's Ticket Guy.

The Club Store is expected to move by May 1.
Many more details inside on page 29.

Alvin Blain: From Garage to General Manager to Retiree

■ **General Services General Manager Alvin Blain retires after 35 of City service.**



GENERAL SERVICES — The one-time garage attendant is retiring as General Manager.

Alvin Blain, the General Manager, General Services, and longtime Club Member, retired April 1 after 35 years of City service. An official retirement party was held in his honor March 25.

Alvin Blain, General Services General Manager

Inside this month's issue: His accomplishments, photos of his career, and his thoughts as he retires.

"The real success of my time here was the journey, the path, the friends, the 35 years," he says. "I'm just lucky that people allowed me to be a part of their success."

See the story on page 42.



Last year, *Alive!* showed you where the City's water came from. Now, here's ...

Where the Water Goes

Alive! visits the world-class Hyperion Treatment Plant.

SEE PAGES 14-19.

From left: Steven Fan, Plant Manager, and Charles Turhollow, Division Manager, at the Hyperion Treatment Plant in Playa del Rey.



City Employees Club of Los Angeles
350 S. Figueroa St., Suite 700
Los Angeles, CA 90071

CHANGE SERVICE REQUESTED

PRSR STD
US POSTAGE
PAID
Permit #30391
Los Angeles, CA

It's almost

Mother's Day

Tell mom you love her ... in *Alive!*
Details, page 13.

ALIVE! FEATURE: Hyperion Treatment Plant

Where the

Water Goes

Last year, you enjoyed *Alive's* feature on the L.A. Aqueduct, showing where some of the City's water came from. Now it's time to turn the tide, and see where it goes after it leaves your house or office, and before it reaches the ocean.

Here's *Alive's* day at the world-class Hyperion Treatment Plant.



From left:
Charles Turhollow, Division Manager;
Steven Fan, Plant Manager; and Club
CEO John Hawkins at the Hyperion
Treatment Plant in Playa del Rey.

Where the Water Goes

Hyperion Treatment Plant

LOCATION:

12000 Vista del Mar
Playa del Rey

SIZE:

144 acres

SERVES:

Entire City of Los Angeles
(except Harbor area) and
contract cities

OPENED:

1925 as screening plant;
1950 as full secondary
treatment plant

PLANT MANAGER:

Steve Fan

NUMBER OF EMPLOYEES:

430 (Fiscal Year 2004-05)

ANNUAL BUDGET:

\$49,639,103
(Fiscal Year 2004-05)

REUSE:

650 tons of biosolids sent
to Green Acres Farm (Kern
County) per day as a fertilizer
and soil amendment; 8 million
cubic feet of biogas converted
to electricity per day

WASTEWATER HANDLED:

450 million gallons per day

**For more information or
tours, call (310) 648-5000
or go to: www.lasewers.org**



At the Secondary Treatment Operations Center Control Room are, back row, from left: Chang Huang, Instrument Mechanic, 18 years; Rudy Lingat, Waste Water Treatment Operator I, 20 years; and Allan Huang, Waste Water Treatment Operator II, 23 years. Seated: Serafin Malabanan, 17 years, and Oscar Espineda, Waster Water Operator, 22 years.

Hyperion: Innovation and Excellence

The Hyperion Treatment Plant in Playa del Rey is where most of the City's pipes and sewers end, and where the serious work of cleaning up the water begins. The plant's modernization was voted one of the ten best public works projects of the 20th century, on par with Hoover Dam and the Golden Gate Bridge.

PUBLIC WORKS — The Hyperion Treatment Plant is the City's oldest and largest wastewater treatment facility and has been operating since 1894. The plant has been expanded and improved numerous times over the last 100-plus years. Today, leading edge technological innovations capitalize upon the opportunity to recover wastewater bio-resources that are used for energy generation and agricultural applications. In addition, air emission controls and odor management facilities are integrated in all improvements. More of these forward thinking strategies will become realities at Hyperion in the coming years to better protect our coastal environment and serve our communities.

November 23, 1998 is considered by many Southern Californians as the most important day in the history of healing Santa Monica Bay. On this day, the Hyperion Treatment Plant operated at full secondary treatment capacity for the first time in nearly half a century. This achievement assured the four million residents of Los Angeles and millions more neighbors and visitors that the world-renowned Santa Monica Bay would be protected from wastewater pollution for future generations.

History

The Early Years

In the late 1800s, wastewater from Los Angeles—*El Pueblo de Nuestra Senora la Reina de Los Angeles del la Porciúncula*—was conveyed through natural waterways to the ocean. In 1892, the City purchased 200 acres of oceanfront property, and from 1894 until 1925, raw sewage was discharged into near-shore ocean waters at Hyperion's future location.

Visitors to local beaches objected to raw sewage in their recreational waters, and in response, the City built and started operating the first treatment facility at the Hyperion site in 1925: a simple screening plant. This plant remained in operation until 1950.

1950: A New Full Secondary Plant

The screening plant was not effective in preventing beach closures; highly polluted wastewater was still being discharged into near-shore waters. Just after the end of World War II, the City began to develop plans for a full secondary treatment plant at the Hyperion site. When the new Hyperion Treatment Plant opened in 1950,

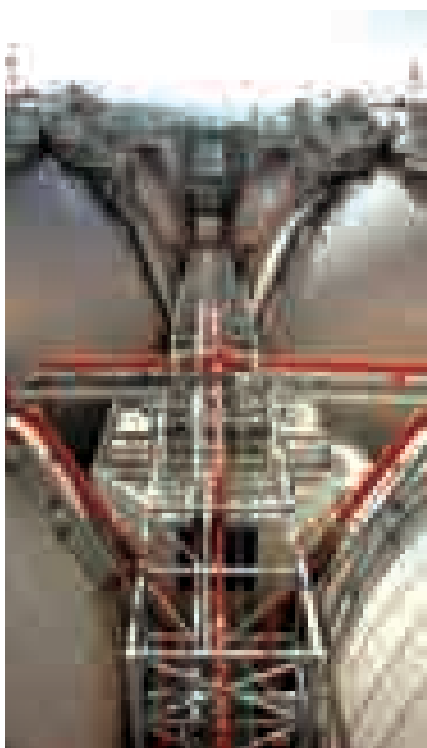
it included a full secondary treatment system and biosolids processing to produce a heat-dried fertilizer. It was among the first facilities in the world to capture energy from biogas by operating anaerobic digesters, which have yielded a fuel gas by-product for more than 50 years. At the time, Hyperion was the first large secondary treatment plant on the West Coast, and one of the most modern facilities in the world.

Population Explosion

In the 1950s, the population of Los Angeles grew dramatically. To keep up with this growth and the associated higher wastewater flows, Hyperion's treatment levels were cut back. By 1957, the new plant was discharging a blend of secondary and primary effluent through a five-mile ocean outfall. Hyperion also stopped its biosolids-to-fertilizer program and began discharging digested sludge into Santa Monica Bay through a separate, seven-mile ocean outfall.

Sludge Out of Santa Monica Bay

In the 1980s, marine life in Santa Monica Bay suffered from the continuous discharge of 25 million pounds of wastewater solids (sludge) per month. Samples of the ocean floor where sludge



The egg-shaped digesters are visual trademarks of the Hyperion Plant.

ALIVE! FEATURE: Hyperion Treatment Plant

— continued from page 16

had been discharged for 30 years demonstrated that the only living creatures were worms and a hardy species of clam. Additionally, coastal monitoring revealed that Bay waters often did not meet quality standards as the result of Hyperion's effluent. These issues resulted in the City entering into a consent decree with the United States Environmental Protection Agency and the State of California to build major facility upgrades at Hyperion. In 1980, Los Angeles launched a massive sludge-out to full secondary program to capture all biosolids and keep them from entering the Bay. The sludge-out portion of the program was completed in 1987.

Full Secondary System Rebuilt

The \$1.6 billion sludge-out to full secondary construction program in the 1990s replaced nearly every 1950-vintage wastewater processing system at Hyperion while the plant met all NPDES permit requirements. The full secondary system, completed in 1998, meant:

- treatment capacity was expanded to prevent virtually all minute particles suspended in effluent from being discharged to the ocean environment
- production of the cleanest effluent in more than 100 years
- the end of wastewater spills at Hyperion
- a 95 percent reduction in the amount of wastewater solids going into Santa Monica Bay
- the elimination of the Bay's ecological dead-zone near the mouth of the sludge outfall
- vast improvements in biological integrity of the bottom-dwelling marine community
- remarkable increases in the relative abundance of many indicator-species, and
- partnerships among the public, regulatory agencies, government and dischargers that led to one of the great environmental achievements of the 20th century.

Today

Further improvements at Hyperion are being planned and built to keep the plant on the leading edge environmental protection. Air emission controls continue to represent the leading edge of technology. Odor management facilities are integrated in all improvements. Resource recovery programs capitalize upon every possible opportunity to recycle renewable resources of wastewater and sludge treatment by-products.

Primary Treatment

Primary treatment is provided to raw wastewater after it enters Hyperion to remove 85 percent of organic and inorganic solids. The process is a simple one: screened wastewater is detained undisturbed for one to two hours in primary sedimentation tanks, as solids (primary sludge) settle to the bottom of the tanks, or float to the surface. Chemicals are added to improve the efficiency of the settling process.

Sludge is collected in sumps, where it is pumped to anaerobic digesters for further processing. All incoming wastewater receives advanced (chemically assisted) primary treatment.

Secondary Treatment

Secondary treatment removes practically all organic and inorganic solids that remain in primary effluent. Purification processes found in nature are duplicated, including biological treatment and clarification.

Biological Treatment: Primary effluent is distributed to aeration basins. Living microorganisms, called "activated sludge," feed on organic material remaining in primary effluent and multiply. Oxygen, blown in through thousands of diffusers, accelerates the biological process.

Clarification: After the microorganisms deplete their food supply, treated wastewater flows into secondary clarifying tanks where settling of the biomass occurs. The majority of the settled solids (activated sludge) is returned to aeration basins to continue purifying incoming primary effluent. Excess waste activated sludge is collected, thickened and pumped to digesters.

Secondary effluent, the cleaned wastewater, is virtually free of pollutants and is compatible with the marine environment. The effluent is discharged through the five-mile ocean pipeline; a portion is recycled for process and irrigation uses within the treatment plant.

Biosolids

Biosolids start as sludge, the solid part of wastewater that arrives at the treatment plant and is processed by separation, heating, and dewatering. The City generates an average of 650 wet tons per day of dewatered, digested biosolids at the Hyperion Treatment Plant and 50 wet tons per day at the Terminal Island Treatment Plant. Sludge from the wastewater that is treated at the Tillman and Los Angeles - Glendale Water Reclamation Plants is piped to the Hyperion Treatment Plant, where it is processed into useful biosolids.

The biosolids produced at Hyperion were disposed in the ocean and in landfills until 1989, when the City started an extensive beneficial reuse program that continues today. The City received national awards from the U.S. EPA for rapid conversion from disposal to beneficial use of biosolids in 1989 and outstanding 100 percent beneficial reuse in 1994. In 2003, special recognition and awards were received from the Association of Metropolitan Sewerage Agencies (AMSA) and U.S. EPA for the City's Exceptional Quality Biosolids Program.

The biosolids are loaded on to trucks at the plants and transported to the 4,688 acre City-owned Green Acres Farm in Kern County, where most of the biosolids are applied as a fertilizer and soil amendment. Corn, wheat and alfalfa are grown on the farm as non-food crops. The biosolids produced at the treatment plants conform to Class A "Exceptional Quality" biosolids standards as defined by the U.S. Environmental Protection Agency. Scientific studies have consistently shown that Class A biosolids are safe and beneficial when used in land application. A smaller portion of the biosolids is mixed with green waste and zoo manure from the Los Angeles Zoo to produce compost at the Griffith Park Composting Facility.

Revolutionary TIRE Project

The Bureau of Sanitation, faced with the ongoing and mounting problem of what to do with biosolids, the soil-like by-product of wastewater treatment, started building a project last year that it hopes will answer that big challenge – and create clean energy in the process.

The project is called the Terminal Island Renewable Energy project, which will inject biosolids into depleted oil and gas reservoirs 5,000 feet below Terminal Island. The biosolids will then be converted to clean energy through the natural conditions of high temperature and pressure existing below the earth's surface.

The Bureau hopes that the project will make the trucking of some 700 metric tons of biosolids to Kern County a thing of the past.

Alive! reported on the project last June, and will follow the project and report back upon its completion, perhaps later this year.

World-Class Technologies

The original treatment plant that was built in 1950 left little room for expansion or construction of new facilities at Hyperion. Designers turned to several world's-first and emerging technologies to keep treatment of wastewater, biosolids and biogas within the property's footprint while pursuing the best treatment processes to protect the public health and the health of Santa Monica Bay.

Some of the cutting-edge processes that have been utilized include the following:

- The United States' first liquid "redox" process was installed to remove hydrogen sulfide from digester gas.
- One of the world's largest and earliest full-scale installation of high capacity, high performance dewatering centrifuges (nine total) are at Hyperion, each rated at 600 gallons per minute
- One of the world's largest collection of egg-shaped digesters are operating at Hyperion

— continued page 18



Plant Manager Steve Fan and Club CEO John Hawkins at Hyperion.

The Terminal Island Renewable Energy Project will inject biosolids into depleted oil and gas reservoirs. The Bureau hopes the project will make trucking some 700 metric tons of biosolids every day a thing of the past.

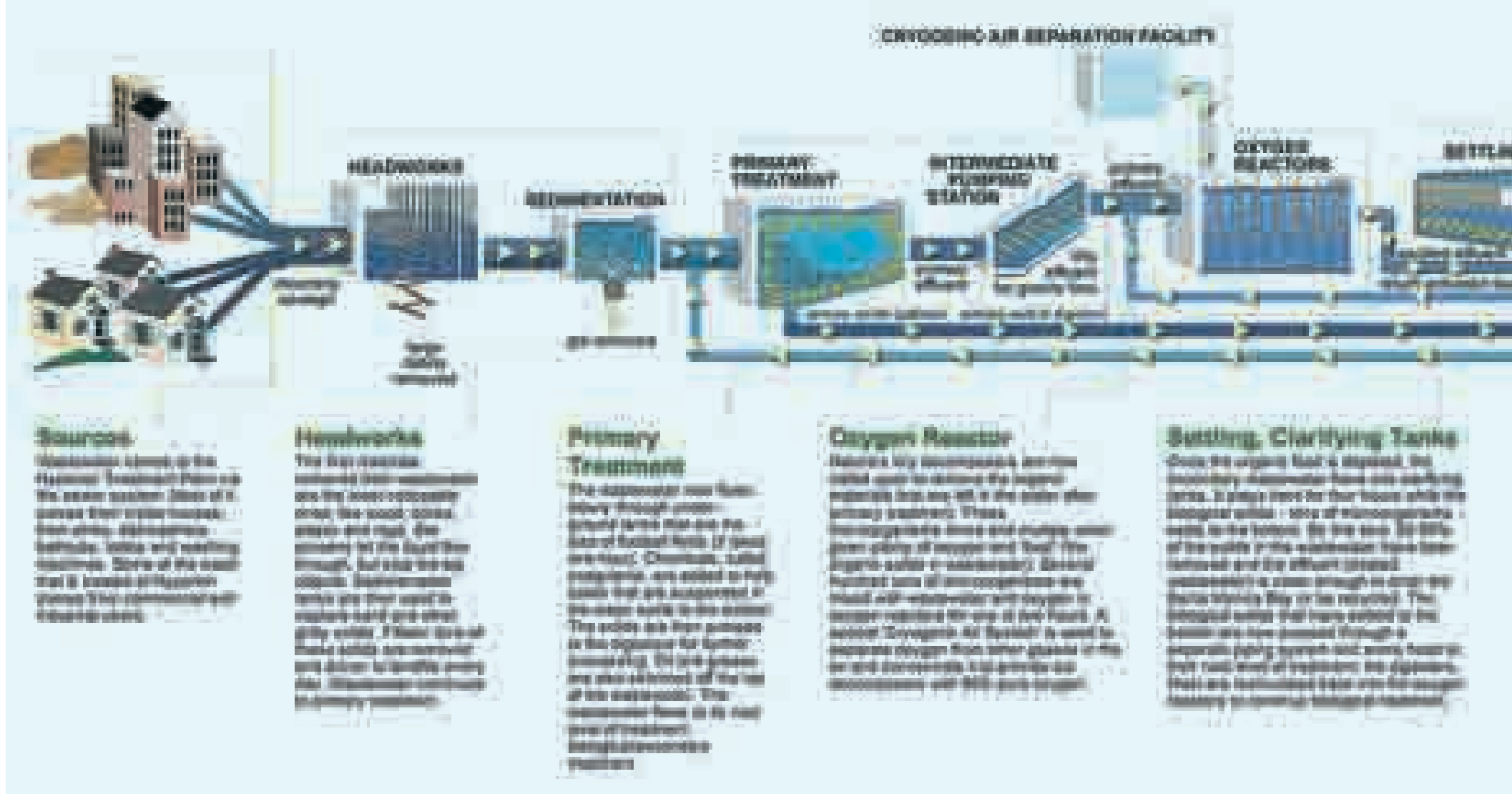


Plant Manager Steve Fan and Division Manager Chuck Turhollow explain the Headworks to Club CEO John Hawkins.

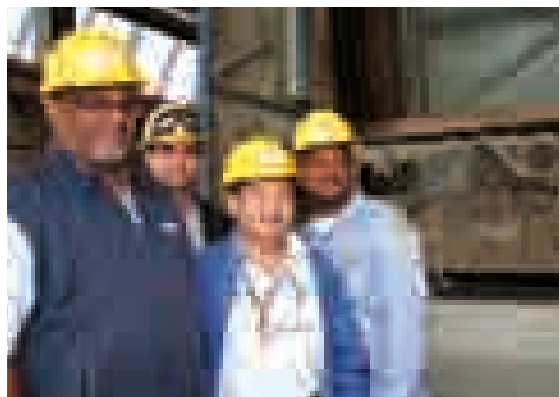


Division Manager Chuck Turhollow points out some of the solid refuse filtered out of the raw wastewater at the Headworks.

Hyperion Wastewater Treatment System



These settling tanks play an important role in cleaning the City's wastewater.



At the Headworks, standing in front of one of the giant screeners are, from left: J. Smith, Intermediate Waste Water Operator, 24 years; George Poncé, Waste Water Operator I, 1 month; Oscar De La Paz, Acting Sr. Waste Water Operator, 21 years; and J.D. Smith, Waste Water Treatment Operator I, 20 years.



Allan Huang, Waste Water Treatment Operator II and Chief Trainer for the Cryogenic Facility, 23 years.



Salvador Lopez, Gardener Caretaker, 4 years.



Mario Mira, Mechanical Helper, 7 years.

Where the Water Goes

— continued from page 17

- 20 digesters that can handle 45 million gallons per day of biosolids, plus 18 original digesters that can handle 35 million gallons per day.
- A biogas/steam energy exchange agreement.
- The tracking of odors and installation of odor scrubbers enabled Hyperion to achieve a 10-fold decrease in the number of odor complaints while essentially doubling the size of the operating facilities.
- Los Angeles is the largest municipal agency in the United States converting sludge to Class A (exceptional quality) biosolids using a pasteurization process; these biosolids have been produced since 2000.

Maintenance and Operations

Maintenance personnel at Hyperion perform scheduled and corrective maintenance on thousands of pieces of manual and computer-controlled equipment. The work is carried out by about 275 skilled staff members. The spectrum of work ranges from tasks as simple as changing light bulbs to replacing 1200 horsepower motors.

Plant operations staff consists of 150 people who are responsible for taking readings, monitoring operations, making adjustments to equipment, and conducting preventive maintenance. Staff is on duty 24 hours a day to ensure that the plant functions properly.

Maintenance and operations staffs join teams, participate in workshops, and go on retreats that are designed to encourage feedback on how to improve the plant's efficiency and effectiveness. Staff and management collaboration have resulted in significant cost savings for the City and its ratepayers.

Awards

The City's Hyperion Treatment Plant has won more than 25 major national and international awards since 1990. But the biggest one named it one of the top 10 public works projects for the entire 20th century.

The American Public Works Association (APWA) selected the Hyperion Treatment Plant Sludge Out to Full Secondary Projects of the 20th century. This award was given for nearly two decades work by the Bureaus of Engineering, Sanitation and Contract Administration. The \$1.4 billion Hyperion Project assures residents of Los Angeles, tourists and neighbors of our City that the world renowned Santa Monica Bay would be protected from wastewater pollution for generations to come.

APWA developed the Top Ten Public Works Projects of the Century Program to honor the ten most outstanding public works projects of the 20th century that significantly affected and improved the quality of life in the United States or Canada. The goal was to generate awareness of the positive contributions public works has made as well as to build appreciation for public works and its contributions to North America.

The program considered public works contributions from projects of all sizes and agencies of all levels of government within the United States, Canada, and their territories.

The list of the winners:

- Hyperion Treatment Plant
- Bay Area Rapid Transit
- Panama Canal
- Hoover Dam
- St. Lawrence Seaway
- Grand Coulee Dam
- Interstate Highway System
- Golden Gate Bridge
- Reversal of the Chicago River
- Tennessee Valley Authority

For More Information

For more information or to schedule a tour of the Hyperion Treatment Plant, go to: LAsewers.org



Water Reuse

Much of the wastewater treated at the plant is recycled. Some treated effluent is pumped to a pond for reuse in the district, and some is used for irrigation. The plant also has a water reuse system for the plant. This system allows the plant to reuse water for irrigation of the plant. About 95% of the treated water is recycled. A water reuse system is a system of a water reuse system that allows the plant to reuse water for irrigation of the plant. This system allows the plant to reuse water for irrigation of the plant. This system allows the plant to reuse water for irrigation of the plant.

Digestion

After the first stage of treatment, the wastewater is pumped to the digester. The digester is a large tank where the wastewater is treated. The digester is a large tank where the wastewater is treated. The digester is a large tank where the wastewater is treated. The digester is a large tank where the wastewater is treated. The digester is a large tank where the wastewater is treated.

Chemicaling

Sludge is very heavy when it comes out of the digester. To keep the sludge from settling, we add chemicals to it. The chemicals are added to the sludge to keep it from settling. The chemicals are added to the sludge to keep it from settling. The chemicals are added to the sludge to keep it from settling.

Energy Recovery

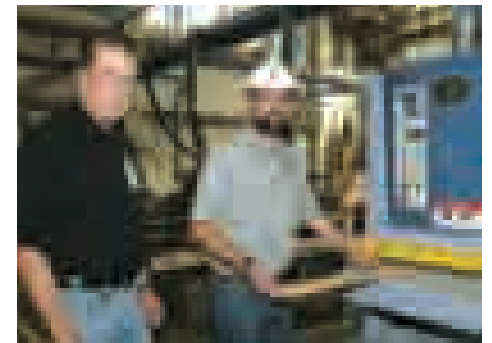
Sludge gas (biogas) produced during digestion is captured and used for energy. The gas is captured and used for energy. The gas is captured and used for energy. The gas is captured and used for energy. The gas is captured and used for energy.



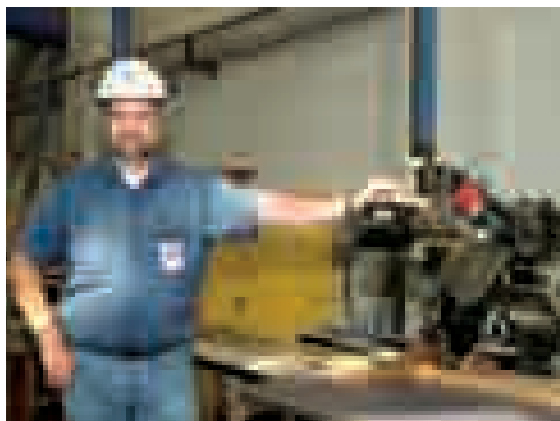
Working in the Headworks, where the giant trash screeners are, are, from left: Pete Sierra, Sr. Waste Water Mechanic II, 21 years; Vince Ruiz, Waste Water Mechanic I, 6 years; Earl Mallet, Mechanical Helper, 18 years; Lee Chavers, Mechanical Helper, 19 years; and Greg Scalzo, Mechanical Helper, 3-1/2 months.



In the Welding Shop, gathered around the "Iron Worker" are, from left: Todd Cromwell, Welder, 3 years; Jaime Alvarez, Mechanical Helper, 2 years; Dennis Flinn, Welder, 20 years; Tim Hall, Welder, 12 years; and Don Kutsch, Welder, 8 years.



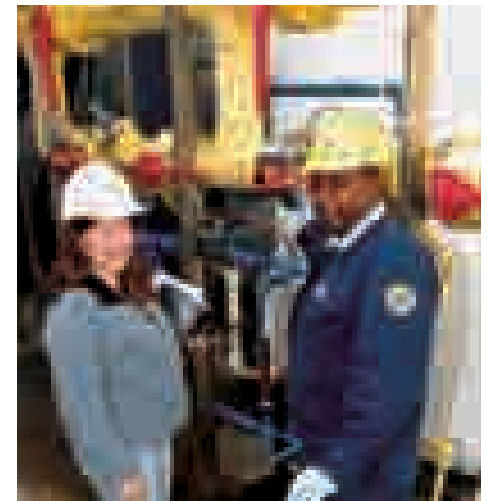
In the Carpenter Shop, working on the drum sander are, from left: Matt Poiré, Carpenter Supervisor, 8 years; and Jeff Crane, Sr. Carpenter, 25 years.



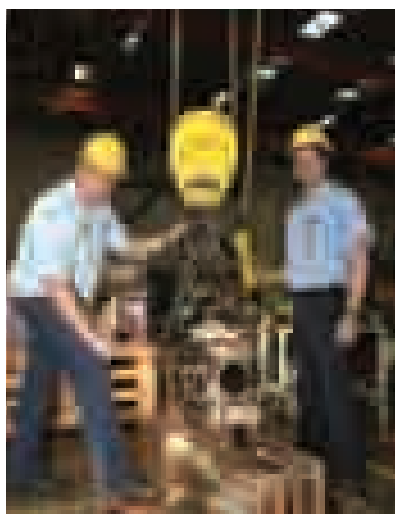
In the Carpenter Shop: Ted Piper, Sr. Carpenter/Planner, 23 years.



John Parrish, Power Shovel Operator, 22 years, was driving a tour tram on the day we visited.



Sheri Symons, Environment Engineer, 19 years, and Anthony Brown, Plant Equipment Trainee, 7 years.



In the Machine Shop, working on a digester gearbox, are, from left: Raymond See, Machinist, 24.5 years, and Mathew Tobin, Machinist 4.5 years.



In the Mechanical Shop, from left: Marcus Lyons, Waste Water Treatment Mechanic Supervisor, 21 years; Jose Alvarez, Waste Water Treatment Mechanic I, 8 years; and Gabriel Viado, Waste Water Treatment Mechanic II/Maintenance Planner, 7 years.



Anthony Bonner, Sr. Window Cleaner, 23 years.



In the Carpenter Shop: Robert Raschke, Carpenter, 1 year.