Headworks® INTERNATIONAL

CASE STUDY: Tillman Water Reclamation Plant LOS ANGELES, CA, USA

MS™ Bar Screens Simplify Maintenance and Increase Tranquility

Customer: City of Los Angeles
Industry: Water Reclamation

Background

The City of Los Angeles Donald C. Tillman Water Reclamation Plant (DCT) combines technology with tranquility. The DCT is home to both a wastewater treatment facility and a Japanese garden open to the public all year long. Water is a central element to any Japanese garden and the fact that the water used in the Tillman Japanese garden is reclaimed adds to the overall sense of harmony.

Over 25 million gallons per day of reclaimed water is produced and about 2.5 million gallons per day are recycled at the plant for treatment processes, landscape irrigation, cooling of plant equipment, air conditioning, and other applications. Over 23 million gallons per day are recycled to the three nearby lakes: the Japanese Garden Lake, the Wildlife Lake, and the Balboa Recreation Lake. The remainder of the Plant's treated water is discharged directly to the Los Angeles River. The plant's discharge, combined with the outfall from the three lakes, provides a minimum of 20 million gallons per day to the Los Angeles River for support of the river's riparian habitat.

KEY FACTS

- **Installed:** 2007
- **Number of Screens:** 4
- **Flow:** 1.58 m^3/s (36 MGD)
- **Screen Size:** 4.73 m long (15.53 ft)
  1.47 m wide (4.84 ft)
- **Channel Depth:** 2.87 m (9.43 ft)
- **Channel Width:** 1.52 m (5 ft)
- **Bar Spacing:** 12.7 mm (1/2 in)
- **Construction:** Grade 3/16 Stainless Steel

QUALITY THAT NEVER QUITS™

Why DCT chose Headworks

Pritpal Jhaj, Maintenance Supervisor at the plant, explained that before the Headworks® MS Bar Screens were installed at Tillman, maintenance was tedious, frequent, and hazardous on the old climber screens at his facility. When maintenance and repairs were required, crew members had to set up fans and don face masks and other hazmat gear, then drop a ladder and climb into a confined space where air quality and other conditions were hazardous. One chore Mr. Jhaj and his team especially dreaded was the required greasing of the climber screens every week!

Mr. Jhaj is extremely delighted that he now has virtually no maintenance issues with his MS Bar Screens long after installation. When asked why he chose Headworks for the project, he said he was looking for equipment that would be trouble free. From the beginning he really liked the Headworks concept of rakes moving along channels. The previous rakes in his facility had issues with a system that would misalign and break.

Solution

Mr. Jhaj said “Inspection and maintenance can easily be accessed and completed at the ground level. Workers can easily view activity through observation doors. You can just walk up and see it working.” The new screens cover the channel, so no one can possibly fall and get hurt. When asked about the performance of the screens, Ed Lozon, Maintenance Manager, said, “If everything ran like this screen, the maintenance department could all go home.” They are so pleased with the equipment that they have recommended the system to their sister facilities.

The solid construction of the stainless steel was an upgrade for DCT over the carbon steel of the previously installed models which became corroded in their hazardous environment. The multiple rake system that keeps a constant flow of debris and other material moving along was a strong selling point. Additionally, they viewed the variable drive system as a huge plus: the system automatically slows or speeds up to maintain an appropriate water level.
Mr. Jhaj is pleased that the flow of material from the screen troughs and drain lines is constant, which prevents clogged lines. Another benefit is the patented self-reversing feature that automatically dislodges debris. The installation of the screens was a smooth custom fit to the existing space.

> *“If everything ran like this screen, the maintenance department could all go home.”*
>
> *- Ed Lozon*
>
> *Maintenance Manager*

Before (left) and after (right)
Tillman Water Reclamation Plant, Los Angeles