City leaders celebrate opening of water treatment facility

Santa Monica expected to be self-sufficient by 2020

By Ashley Archibald

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WEST L.A. — City staff and notables celebrated the opening of the Santa Monica Water Treatment plant Thursday with an ambitious new goal — to make Santa Monica self-sufficient for water by 2020.

The event marked the end of a 15-year saga that began when methyl tert-butyl ether, or MTBE, was found in the water supply, the result of leaking pipes from nearby gas stations.

The chemical contaminated seven of the 11 water wells that served city residents, cutting the local water supply in half.

It forced City Hall to purchase water from the Metropolitan Water District, a northern California concern that transported the water hundreds of miles before it arrived in Santa Monica taps.

An arduous court process resulted in a total of $250 million across two settlements between the city and the culpable companies, as well as the design of a plant capable of removing MTBE from the water.

Some of that money paid for the imported water, but approximately $100 million of that was appropriated for the high-tech facility that began providing water to the city Dec. 4, 2010.

“There is a palpable sense of excitement,” said City Manager Rod Gould.

so CLEAN: The Santa Monica Water Treatment plant uses three banks of filters at any given time, which treat up to 6 million gallons of water a day. Photo by Ashley Archibald.
The plant uses two different filtration systems to optimize both the cleanliness of the water and the lifetime of the facility.

First, water from the Charnock Wells, located 3.5 miles from the site, is pumped from 400 feet beneath the ground.

It then travels to the facility, located just outside the city's border in West L.A., on Bundy Drive.

Water passes through a series of large green tanks filled with "greensand," a substance that removes iron and manganese that would otherwise clog up the expensive filters that complete the purification.

Myriam Cardenas, Santa Monica's chief water chemist, said each of the greensand tanks are 40 feet long and weigh 60 tons while empty.

Water is also sent to a series of 16-foot-tall tanks filled with 20,000 pounds of granular activated carbon, or GAC, which acts as another filter before being sent to the actual treatment plant.

The treatment plant consists of four banks of filtration. Only three are operating at any given time, with the fourth standing by in case one of the others fails or needs maintenance, Cardenas said.

Water gets pushed through three rounds of filtration in order to get the most water at the end of the process. The system captures 82 percent of the water that goes in, Cardenas said.

Plant operators then add chemicals back into the water, such as fluoride for dental health or sulfuric acid to balance pH levels.

The plant represents not only a huge amount of work on the part of city staff, it also stands as a promise to residents of self-sufficiency and self-reliance.

With the new treatment facility online as of December 2010, Santa Monica will never have to cede local control over the vital resource, Barboa said.

Today, the plant produces approximately 70 percent of the water residents use.

City staff believe it will be possible to be 100 percent self-sufficient by 2020, and will present methods of achieving that high goal at a March City Council meeting.

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