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Plant likely ready by fall

By Gary Scott
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A treatment plant to clean the toxic chemical perchlorate from Pasadena's groundwater should be up and running by fall, according to NASA and city officials.

The announcement comes after NASA abandoned plans to pump contaminated groundwater out of the Monk Hill basin and pipe it to a treatment facility being constructed at the Jet Propulsion Laboratory in La Cañada Flintridge, which is owned by the space agency.

Steve Slaten, who is heading the remediation project for NASA, said recent advances in technology makes treating the water at the well-heads a cheaper and more efficient solution.

"Also, it helps control the plume," said Brad Boman, engineering manager for Pasadena Water and Power. "The sooner we can start pumping water out of the ground, the more control we have on the groundwater plume."

Perchlorate, a salt used in solid rocket fuel, flares and automobile air bags, impairs thyroid function at certain levels. Rocket testing at JPL in the 1950s is believed responsible for most of the contamination in this area.

Pasadena Water and Power has had to shut down nine wells because of perchlorate contamination. Two have since reopened after levels fell below state standards and two others will remain closed.

The treatment plant will target the four wells that draw water from the Monk Hill basin, which runs under the Hahamongna Watershed Park and JPL. An ion exchange filtration system will be used to remove perchlorate from the water.

Six vessels, each about 12 feet tall and 12-feet in diameter, will be installed, likely near the Windsor Reservoir. The vessels have the capacity to filter about 7,000 gallons of water per minute.

A separate treatment facility will remove volatile chemical contaminants, making the water safe to drink, Boman said.

A smaller plant is being constructed for the Lincoln Avenue Water District and should be completed by next month.

Bob Hayward, general manager of Lincoln, said the plant will filter about 2,000 gallons per minute on its two wells. He expects to see a significant savings since Lincoln imports all of its water from the Metropolitan Water District.

A third treatment plant will be built on the JPL grounds to siphon off and clean the most polluted water. The system will use microbes to eat the perchlorate.

Tests have found perchlorate levels as high as 13,000 parts per billion in the basin, more than 3,000 times higher than the 6 ppb state guidelines. The water around the Pasadena and Lincoln wells is not as high, but Slaten said the ion exchange system will clean the water to below 4 ppb. NASA will fully fund the cleanup, he added.

Researchers and health experts continue to debate the level at which perchlorate constitutes a danger. In March, the state Office of Environmental Health Hazard Assessment set the threshold at 6 parts per billion. One part per billion is equal to a cup and a third in a Rose Bowl full of water.

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