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## Wellhead treatment, municipal water production well (Altadena, California)

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Lindmark Engineering completed a design/build project for wellhead treatment to remove trace concentrations of chlorinated compounds from a water production well belonging to the Las Flores Water Company.

This project involved finishing a 30-percent design begun by another consultant, obtaining permits, and carrying out construction and startup activities. The scope included designing and constructing a 20,000-pound, low-profile granular activated carbon vessel, a sand separator, a motor control center, a chlorination system, and all associated piping, valves, and appurtenances to treat water pumped from the existing well before it is distributed to the Altadena area. The design flow rate of this system is approximately 750 gallons per minute. In addition, we demolished the old pump house and constructed a new one to match the surrounding residential styles.

After completing the design phase, we encountered challenges during the permit phase of the project. Because the well is located in a residential area, we had to obtain a conditional use permit before we could acquire the zoning permit. After procuring the permits, we completed the construction, performed hydrostatic testing, disinfected the new system, replaced the perimeter fence, installed a frontage fence with a concrete masonry wall and iron panels, constructed a gravel-based roadway, and landscaped the frontage. We completed startup activities in early 2002, after the California Department of Health Services approved the well amendment permit. *Client: Las Flores Water Company*

For more information on this project, please contact Lindmark Engineering at (818) 707-6100 or [sales@lindmarkeng.com](mailto:sales@lindmarkeng.com).