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State throws down caution flag over tower repair plans

By Nick Marnell



Photo courtesy EBMUD

The base isolator design being considered by the East Bay Municipal Utility District to retrofit the Lafayette Reservoir outlet tower has received lukewarm support from a state regulatory agency.

The California Division of Safety of Dams this summer released new classifications and ratings for its statewide jurisdictional dams and the agency found that, of the 22 dams owned by EBMUD, all received a satisfactory rating but one: the Lafayette Reservoir. DSOD said that the Lafayette dam can be operated safely in current conditions, but the reservoir outlet tower was vulnerable to a seismic event. Though EBMUD had planned to retrofit the tower by 2022, the state agency said the proposed timeline was unacceptable, with continued delays "increasing the potential risk to public safety."

EBMUD and its consultants worked on several models for retrofitting the tower and submitted the base isolator option to the agency for review in August. The base isolator would separate the tower from its foundation, with the foundation absorbing the earthquake force and causing the tower to feel less of the shaking.

In a December letter to the district, Sharon Tapia, DSOD chief, questioned using the base isolator concept as it has not been used on any of the state agency's jurisdictional towers. "Consequently, we caution that the isolator shown ... may not be an appropriate solution for a tall slender tower, such as the one at the Lafayette Dam," Tapia wrote.

The agency told the district it needs to submit technical reviews of the base isolator, including research, testing and analysis; build a large-scale structural model; and engage an independent board of consultants to provide oversight.

"We will fully support the district if you move forward on this concept; however it may be prudent for the district to concurrently develop other design concepts," Tapia wrote.

Xavier Irias, EBMUD director of engineering and construction, explained to the Lafayette City Council Dec. 11 that the district needs to look at how complex fulfilling the requirements for the base isolator would be and how that might delay construction, while at the same time considering other alternatives for the tower retrofit. Irias said that EBMUD has issued a request for proposal for help in modeling, environmental impacts, permitting and outreach for the tower project, and he confirmed that a consultant is coming on board to help navigate the DSOD requirements.

"DSOD doesn't want an operational fix. They want the tower to be failsafe, and we do too," Irias told the council.

Irias said the district plans to finish the tower retrofit by the end of 2020.

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