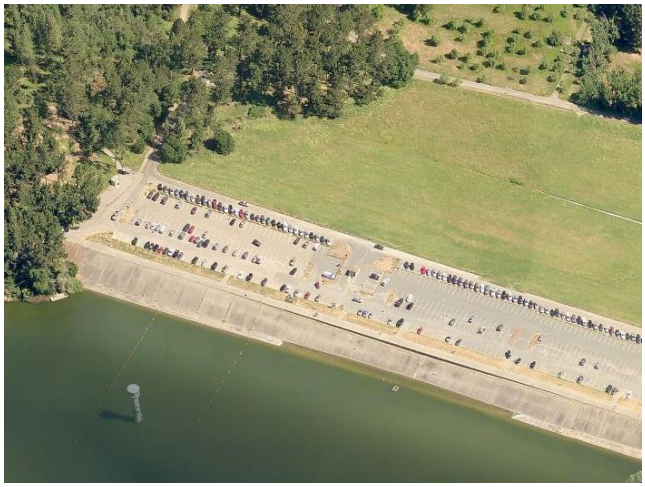
LAFAYETTE RESERVOIR DAM FACT SHEET
CA DIVISION OF SAFETY OF DAMS CONDITIONAL ASSESSMENT

About Lafayette Reservoir
Located in the City of Lafayette, Lafayette Reservoir Dam and its appurtenances, including an outlet tower, were constructed between 1927 and 1933. The reservoir provides an emergency water supply for EBMUD customers. The reservoir and its surrounding watershed land are also a recreational resource, first opened in 1966 and now hosting 1.4 million visitors per year, and habitat for a variety of plant and animal species.



2017 Condition Assessment by Division of Safety of Dams
The State of California Division of Safety of Dams (DSOD) released an updated conditional assessment of their jurisdictional dams on September 1, 2017.

The conditional assessment ratings are:

- **SATISFACTORY** – No existing or potential dam safety deficiencies are recognized and the dam is expected to perform satisfactorily under normal and rare or extreme (earthquake, floods) conditions.
- **FAIR** – The dam is expected to perform satisfactorily under normal conditions, however, there may be dam safety deficiency under rare or extreme conditions.
- **POOR** – A dam safety deficiency is recognized for loading conditions that may realistically occur.
- **UNSATISFACTORY** – An immediate or emergency remedial action is required to resolve problem(s) associated with dam safety.

EBMUD DSOD Regulated Dams
EBMUD has 22 dams under DSOD jurisdiction, 21 of which received the DSOD's highest safety rating 'Satisfactory'. Lafayette Dam received the second highest rating 'Fair.'

Condition Assessment of Lafayette Reservoir Dam and Outlet Tower
The Fair rating for Lafayette Dam is due to the seismic vulnerability of its outlet tower and its location upstream of a populated area. The dam structure itself, an earthen embankment dam, was analyzed and found to perform well during a seismic event.

The seismic analysis of the tower concluded that portions of the tower may be overstressed and crack during a major earthquake of magnitude 7¼ or higher. This could result in the tower's function being impaired. That impairment could result in either of two conditions: the outlet works could be stuck "open", resulting in water being released to the creek below, or the outlet works could be clogged with debris or otherwise stuck in the closed position, resulting in the inability to drain water via the tower.

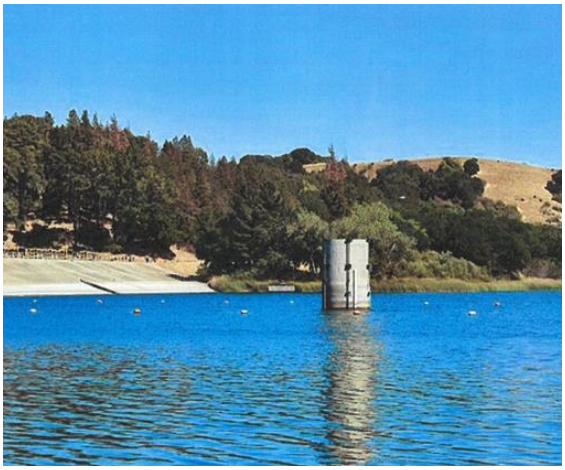
Should either situation occur, EBMUD has the ability to safely manage the reservoir water and downstream impacts. If the tower fails and one of the outlet gates is stuck "open," the water would flow through the dam's outlet pipe and be releases into Lafayette Creek. The release of water could be controlled so that it remains within the creek channel. If the tower failure prevented release of water, EBMUD could release water by portable pumps or with a temporary siphon.

Though it is unlikely that an emergency release of water will be necessary, EBMUD is lowering the operating water level in the reservoir to provide more “freeboard” between the lake and the tower spillway opening. This will provide additional capacity for flood storage and extra time should water releases be necessary.

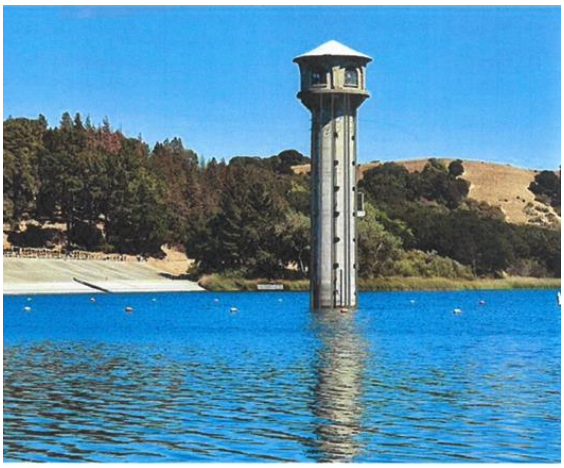
Alternatives to Address Tower

EBMUD is working with DSOD to find an agreeable design solution and to expedite tower repairs. Several alternatives are being discussed including:

Option #1. Cut off the top of the tower. This approach would reduce the weight of the tower and prevent the tower from being overstressed.



Option #2. Strengthen the tower with vertical external tendons. This alternative is significantly more expensive and would require on-going maintenance to ensure the tendons are performing well.



Option #3. Install a base isolation device within the tower. This option would preserve the visual appearance of the tower. **Review of this option is currently underway in concert with DSOD.**

Current and Upcoming Actions:

The District is proactively lowering the reservoir level and performing detailed analyses of base isolator alternative. After DSOD approval, the District will begin planning, including community outreach, followed by design of the project and finally construction, currently estimated at 2020.