Chabot Dam Seismic Upgrade

Frequently Asked Questions

Administrative

What is CEQA?

CEQA is the California Environmental Quality Act, which requires state and local agencies such as East Bay Municipal Utility District (EBMUD) to identify the project's significant environmental impacts and to avoid or mitigate those impacts, if feasible. EBMUD will publish a draft Environmental Impact Report (EIR) that will describe the impacts of the preferred alternative and the proposed mitigations. The public can comment on the draft EIR and those comments and EBMUD responses would be included in the final EIR.

How was the preferred project selected and approved?

The Chabot Dam Upgrade Draft Environmental Impact Report (EIR) was released for public review on December 6, 2013, and a public hearing was held during the 60-day review period. Written comments on the draft EIR were addressed in the final EIR which was released on May 30, 2014. The EBMUD Board of Directors formally certified the final EIR and approved the project on June 10, 2014. The California State Department of Water Resources Division of Safety of Dams (DSOD) will also need to approve the project.

The EIR was prepared by staff and consultants, identified and analyzed two dam upgrade options: soil treatment (cement deep soil mixing) and conventional earthwork. The preferred method was selected based on costs, environmental impacts, and public and resource agency comments. The EBMUD Board of Directors approved the selection of the cement deep soil mixing option in the Jun 10, 2014 meeting.

What was analyzed in the Chabot Dam Seismic Upgrade EIR?

Eleven environmental issues were analyzed in the Chabot Dam EIR: aesthetics/visual quality, biological resources, air quality, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, cultural resources, geology and soils, transportation and traffic, recreation, and noise and vibration. The EIR analysis identifies potential impacts resulting from the project for each environmental issue, and proposes mitigation measures that will avoid, reduce or eliminate the significance of the impact.

Reservoir Operation and Water Use

How is the reservoir's water used, and can more water be used for fish downstream?

Chabot Reservoir water is stored for emergency supply, recreational use, maintenance of flows downstream, and to provide irrigation water for two golf courses. The emergency supply could be used for drinking and/or for fire suppression. Water from Chabot Reservoir has been used for fire suppression on multiple occasions, and at least once in the last ten years.

Separately and unrelated to the proposed project, EBMUD's Natural Resources Department is meeting with creek stakeholders including Friends of San Leandro Creek to discuss lake releases to San Leandro Creek. EBMUD met with the Friends of San Leandro Creek to discuss creek flow concerns in January and March 2014, and the group tentatively plans to meet regularly. Although EBMUD continues to engage in this process, the project would not impact stream flows.

What are the long-term plans for the dam?

The long-term planned use for the Chabot Dam is the same as the current use. Lake Chabot Reservoir provides emergency standby water supply and it supplies raw water to Lake Chabot Golf Course and Willow Park Golf Course. The facility is used extensively for recreation: the East Bay Regional Parks District (EBRPD) leases EBMUD property to operate Lake Chabot Regional Park and Anthony Chabot Regional Park, and the City of San Leandro leases EBMUD property to operate Chabot Park. The retrofits to the dam and the outlet tower will be addressed by this project.

Outlet Works

Is there a way to save the pavilion or retrofit and move it somewhere else?

The pavilion was added to the tower by a private water company 40 years after the tower was constructed. Public access is not allowed due to public safety and water quality concerns. The estimated construction cost to retrofit the pavilion in place to comply with seismic safety standards is substantial, as is the cost to retrofit and move it elsewhere. Additional expenses would have to be incurred to maintain the structure. As mitigation for the removal of the outlet tower and pavilion, EBMUD will prepare an electronic document on the history of Lake Chabot Waterworks District that documents the site in its entirety and is easily accessible to the public. Copies of the document will also be provided to public main libraries of the City of San Leandro, City of Oakland, and unincorporated Alameda County (Castro Valley). This will augment the existing system of interpretive panels for the Lake Chabot Historic walk that the East Bay Regional Park maintains.

Would the work impact the spillway function?

No, the work would not impact the spillway function.

Construction Impacts (Earth Movement/Hauling/Ground Improvement)

What is the expected duration of the construction?

Excavation at the dam and work at the tower are both expected to begin in the spring of 2016. Work at the tower is expected to take approximately 15 weeks; fill and compaction at the dam is expected to end in the fall of 2016.

What will you do if trucks damage the roadway?

EBMUD generally surveys and documents the roadway's condition prior to work and repaves the road to the pre-construction condition.

What is the volume of material to be hauled?

Approximately 32,000 to 39,000 cubic yards of material (soil and solidified mixture of cement and soil) would be hauled and temporarily stockpiled. The project would require the import of 8,100 to 10,800 tons of cement, which uses heavier cement trucks.

What size of hauling trucks will be used to stockpile soil?

The anticipated size is 10 to 20 cubic yard capacity trucks for earthwork.

Where will the excavated soil be stockpiled?

The excavated soil will be stockpiled on the site of the former filter ponds and potentially at Chabot Park. Both sites are owned by EBMUD and the Chabot Park area is leased to the City of San Leandro that operates the Chabot Park.

Is the bridge that crosses San Leandro Creek at the end of Estudillo Avenue rated for construction traffic?

Yes it is. The bridge was upgraded in the 1980s during the dam spillway construction work.

If construction trucks are routed through my neighborhood, how will you account for the safety of pedestrians?

Pedestrian access/safety would be addressed as part of a traffic control plan that will be developed prior to construction. As part of the plan, flaggers can be used to direct traffic at problematic intersections and warning signs can be used to advise motorists of the construction traffic to minimize hazards associated with the truck traffic.

What will be your hours of construction?

The working hours are from 7:00 a.m. to 7:00 p.m., Monday through Friday for all work except the soil treatment. Neighborhood hauling would not take place on the weekends. Soil treatment, which takes place at the dam face, could occur 24 hours/day, 5 to 6 days per week.

What is the cost of the project?

The cost is approximately $19 million for design and construction work at the dam and the outlet tower.

Dam Stability

I am concerned about the stability of the dam. Is the seismic stability report available?

EBMUD has a comprehensive dam safety program. Chabot Dam has been studied extensively and there is no life-safety hazard associated with the dam. The latest seismic stability report is available at the project website.

Is the dam instrumented and monitored?

Dam surveillance instruments (piezometers, drains, survey markers) are installed at the dam. EBMUD inspects the dam and monitors the dam safety instrumentation periodically: drains are continuously monitored and are inspected bi-monthly, piezometers are monitored and inspected monthly, and surveys are performed bi-annually. The instrumentation and survey data are also reviewed by DSOD.

What is the magnitude of the design earthquake on the Hayward Fault, and how does that compare to recent earthquakes?

The stability evaluation and the design for the upgrade are based on the maximum credible earthquake (MCE) on the Hayward Fault, which has a moment magnitude of 7.25. As a comparison, the 1989 Loma Prieta earthquake had a moment magnitude of 6.9, the 1906 San Francisco earthquake had an estimated moment magnitude of 8.0, and the 1868 Hayward Fault earthquake, which occurred before the dam was built, had an estimated moment magnitude of 6.8.

No evidence of instability or apparent damage was reported after the 1906 San Francisco earthquake. Monitoring data before and after the 1989 Loma Prieta earthquake showed no signs of excessive seepage, groundwater level changes within the dam, or permanent displacement. It is important to note that the 1906 San Francisco earthquake and the 1989 Loma Prieta earthquake were on different faults, farther from the dam site, and represent lower levels of seismic risk than the MCE on the Hayward Fault. EBMUD is completing the seismic upgrade of Chabot dam based on the MCE on the Hayward Fault which represents the most severe earthquake forces among the Bay Area faults at the dam site.

How will you keep the dam safe during construction?

The selected option will improve the safety of the dam as the installation of cement deep soil mixing progresses, and does not require any additional measures to keep the dam safe.

There is an inundation map available for this reservoir. What does this mean?

Inundation maps are required by the State of all dams for municipal emergency planning purposes only and are not indicative of the safety and stability of the dam. Again, the dam is safe and is not expected to fail in the maximum credible earthquake.

Recreation and Chabot Park

How will this impact the loop trail around Chabot Lake?

A small portion of the Chabot Bicycle Loop trail will need to be closed across the dam to accommodate the construction and ensure public safety.

Will Chabot Park (located at the end of Estudillo Avenue and operated by the City of San Leandro) be closed if the soil is not stockpiled there? If so, what will happen to the summer camp?

Yes, it will be necessary to close Chabot Park during construction because of the heavy equipment moving through the park. The day camp will have to be relocated, as it was when EBMUD last upgraded in 1980.

San Leandro Creek

The dewatering wells could include fine soil, such as silt, in the pumped water. How will you prevent the silt in the pumped water from entering San Leandro Creek, and has your approach been tested before?

EBMUD plans to use best construction practices in the industry to prevent the migration of silt into the pumped water. In the event that silt is present in the pumped water, that water would be held in tanks to allow the silt to settle out before the water is returned to San Leandro Creek.

Will stream flows in San Leandro Creek be maintained during construction?

Existing stream flows will be maintained.

We would like steelhead in the fishery below Chabot Dam. Can that be part of the project?

Because there are no planned changes to the current stream flows during or after dam construction, mitigation associated with steelhead habitat would not be part of this project.

Are there any steelhead studies on San Leandro Creek?

The National Oceanic and Atmospheric Administration (NOAA) Fisheries is preparing a recovery plan for the central California coast steelhead, and EBMUD has had workshops with NOAA Fisheries on the subject. EBMUD biologists monitor fisheries above and below Chabot Dam on an annual basis. It should be noted that San Leandro Creek runs through a heavily urbanized area, that soils within the creek contain toxins from local urban runoff, and that the creek has been channelized for flood control, which causes flashier runoff. These factors severely compromise creek conditions for fishery.

How will you maintain stream flows during the outlet work improvements?

The outlet would not be operable during the retrofit of the tower and outlet. Stream flows would be maintained by other means, such as pumping water over the spillway through temporary pipes from the reservoir.

Environmental

Will trees be removed because of this project?

EBMUD will need to remove from 75 to 170 trees. The number and location of the trees will be refined as part of the design process and will depend on which haul route and

stockpile locations used. When removal is determined to be necessary, protected trees will be mitigated at a 1:1 ratio. Non-native trees, shrubs, saplings and invasive species (as identified by the California Invasive Plant Council), will not be replaced, unless required by permitting agencies.

Will this project impact the eagle nest at Chabot?

In 2012, a pair of nesting bald eagles were found in a eucalyptus tree near the edge of the lake in its northeastern-most arm, called Bass Cove. This occurrence is approximately 0.25 mile from the project area boundary. No bald eagles have been observed within the project footprint. To ensure there is no impact to bald eagles, EBMUD will implement a worker awareness education program conducted by a qualified biologist, remove trees the project area outside the nesting bird season to ensure bald eagles do not nest in the project area, and conduct pre-construction surveys for nesting birds and delineate no-disturbance buffer zones for any active nests found.