



Mission Viejo RACES – ARES HANDBOOK



MISSION VIEJO EMERGENCY PLAN

ATTACHMENT B

LAKE MISSION VIEJO

1. GENERAL INFORMATION

A. Situation

Lake Mission Viejo is a recreational lake for the use of the residents of Mission Viejo. It is impounded by an earth filled structure that was completed in 1978. It is located in the northeast section of the City and is surrounded by residential developments. The south side dam structure has Alicia Parkway running across the crest. This side has two release gates, one 18" and one 48". Water released would follow a natural streambed "Oso Creek, " through the City and eventually into Trabuco Creek.

The north side is also an impoundment structure, with Olympiad Road across the crest. North of the structure is a large sports complex that could contain excess rainfall and a release from upper Oso Reservoir.

The total area of the lake is 124 acres with a storage capacity of 4300 acres feet. The average depth is 30 with its greatest depth is 70.

The hydrological condition assumes that an earthquake has caused cracking in the dam face and water is leaking, followed by a large volume release and failure of the dam structure.

The initial area affected starts at the south dam face and follows Oso Creek to and under I-5 and then goes south to merge with Trabuco Creek. It eventually goes into the ocean at Doheny State Beach.

Methods for inundation study are prescribed by the State of California Office of Emergency Services and are based on worst case scenarios. Prime considerations are the evacuation of people in the flood path, and a large margin of safety is provided by calculation criteria, assuming a complete dam face collapse and 10- or 100-year flood.

B. Affected Jurisdictions

- City of Mission Viejo
- City of Laguna Niguel
- City of Dana Point
- Portions of the City of San Juan Capistrano