

California Dam Safety Services



Tetra Tech's comprehensive experience, vast technical resources, and financial strength have been proven through four decades of service on all aspects of dam safety projects.

Comprehensive solutions for California dams

Emergency Action Plans

Every dam's Emergency Action Plan (EAP) must be tailored to site-specific conditions and to the requirements of the dam owner and operator. Tetra Tech has prepared over 30 EAPs for Class I dams in the last few years. These have included EAPs that meet the requirements of CA Water Code, Div. 3, §6175-6162, governing dam owners' responsibilities for Inundation Mapping and EAPs. Our experience in the development of EAPs encompasses all basic elements including; dam breach modeling and inundation mapping; coordination for and preparation of notification protocols; development of emergency detection, evaluation, and classification procedures; and delineation of statutory obligations and responsibilities during an emergency.

Operation, Maintenance and Inspection Manuals

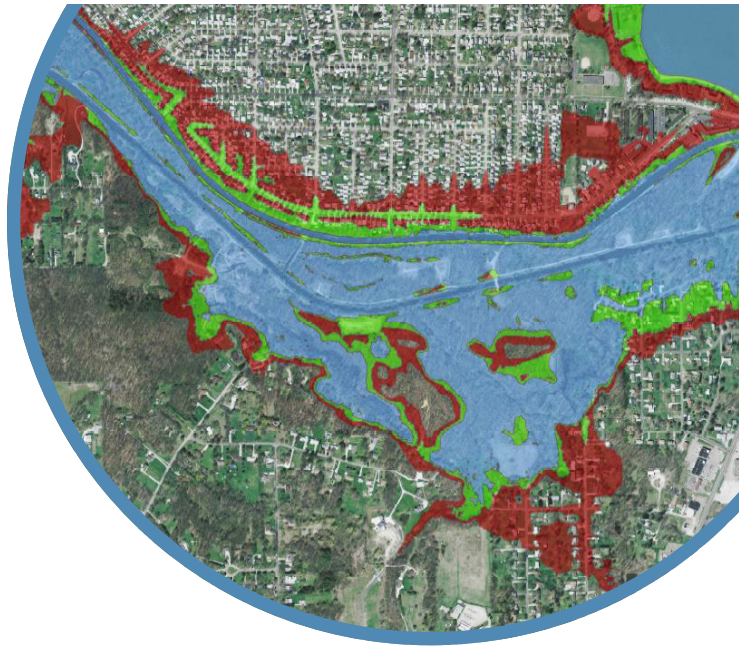
In accordance with CA Water Code, Div. 3, §6100-6102, the owner of a dam shall maintain safe structure and appurtenances through inspection, maintenance, and operation. Tetra Tech has developed Operation, Maintenance and Inspection manuals that meet the requirements for dam safety approval. These manuals identify dam features such as gates and valves that must be routinely exercised as well as inspection and monitoring of a dam's features to identify changing conditions and to ensure proper maintenance.

Hydrologic and Hydraulic Analyses

Tetra Tech has recently completed and secured regulatory approval for numerous hydrologic and hydraulic studies on dams. These studies have included hydrologic modeling, development of the probable maximum flood, design storms, routing of storm events, dam breach analysis and dam breach inundation mapping in accordance with dam safety regulations.

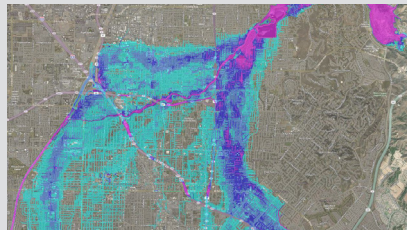
Dam Safety Repairs and Modifications

We provide planning, engineering, design and construction services for dam safety projects. Design, repair and replacement projects completed have included dam features such as lake drains, principal spillways, emergency spillways, embankment modifications, concrete repair, electrical and mechanical controls, seepage collection systems, and dam decommissioning.



Live Oak and Weymouth Reservoirs, Metropolitan Water District

Tetra Tech was tasked through an on-call contract to conduct dam failure inundation studies for two high hazard reservoirs, an earthen dam and an in-ground concrete vault, to meet DSOD compliance after the emergency at Oroville Dam sparked updates to California Water Code section 6161 and associated adopted CCR Chap. 1, Div 2, Title 23 Waters. Breach analysis with sensitivity runs were performed, and the floodplain was modeled and mapped accordingly using FLO-2D and ArcGIS respectively. The report and results were adopted without comment.



Villa Park Dam, Orange County Public Works

Tetra Tech was tasked through an on-call contract to conduct a dam failure inundation study and EAP for this extremely high hazard earthen dam. Breach analysis with sensitivity runs were performed, and the floodplain was modeled and mapped accordingly using HEC-RAS 2D and ArcGIS respectively. The report and results were adopted without comment. Tetra Tech is currently working to finalize the EAP in coordination with OCPW, OC Sheriff, and OC Emergency Management Division.



Lake Gregory Dam, San Bernardino County Regional Parks

Following a seismic retrofit by Tetra Tech, additional effort was requested to conduct a dam failure inundation study and EAP for this high hazard earthen dam. Breach analysis with sensitivity runs were performed, and the floodplain was modeled and mapped accordingly using HEC-RAS 2D and ArcGIS respectively. The report and results were adopted without comment. Tetra Tech is currently working to finalize the EAP in coordination with SBC Regional Parks.



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