

Dam Safety



Dams are an Invaluable Infrastructure Asset

They supply water and flood control, generate power and offer recreational benefits. As owners and operators, your regulatory and social responsibility is to make sure they are safe and reliable. Whether under state or federal jurisdiction, you need to meet minimum standards to do so. When you're ready for a consultant that specializes in dam safety to fulfill your obligations, we are here to provide the right services.

With 125 years of dam engineering and design, we are recognized leaders in dam safety. We apply a "common-sense" approach to reviewing and assessing your dam safety concerns. Our expertise includes risk-informed decision making (RIDM), United States Army Corps of Engineers (USACE) dam safety assessments and Federal Energy Regulatory Commission (FERC) security assessments. We go beyond regulations to think about failure modes, digging deeper to understand our observations. We go the extra mile to develop long-term, sustainable and cost-effective solutions.

"Overall very good performance by this contractor in meeting task order scope of work requirements, being flexible to adjusted scheduled meetings, and providing exceptional geotechnical subject matter expertise including embankment and foundation performance and risk mitigation for Amistad Dam."

– Adam Smith, USACE Tulsa District



“Mead & Hunt is performing FERC Part 12 D Independent Consultant Safety Inspections for our Southern California Edison hydroelectric facilities. Mead & Hunt’s FERC-approved Independent Consultant and the supporting team carry out careful and thorough inspections, and take a practical approach to understanding our dam safety issues. Their resulting inspection reports are a critical component of maintaining Southern California Edison’s dams in a safe and reliable manner. Their experience combined with a collaborative working approach make Mead & Hunt the right people for the job.”

– John Yen, Southern California Edison

Through our inspection, engineering, geological and emergency action planning services, we better understand the entire picture. Our systematic approach gives you the benefit of receiving the best dam safety services available. Our experience includes more than 600 FERC Part 12 inspections, USACE semi-quantitative risk assessments (SQRA) and dam safety modification studies, hundreds of non-FERC dam inspections and evaluations, design and analysis of countless dams, and hundreds of emergency action plans. We have performed numerous condition, regulatory and economic assessments at projects assisting owners with long-range programs for plant rehabilitation, upgrade, replacement, or decommissioning and removal. Our staff has dam and hydro ownership experience that gives our clients a unique and valuable perspective.

Dam Safety Services

- Inspection, analysis, and design
- Dam safety modification studies
- Probable maximum flood and inflow design studies
- Risk analysis and facilitation
- GIS-based inundation mapping
- Emergency action plans and exercises

EAP, Dam Failure Analysis, and GIS Services



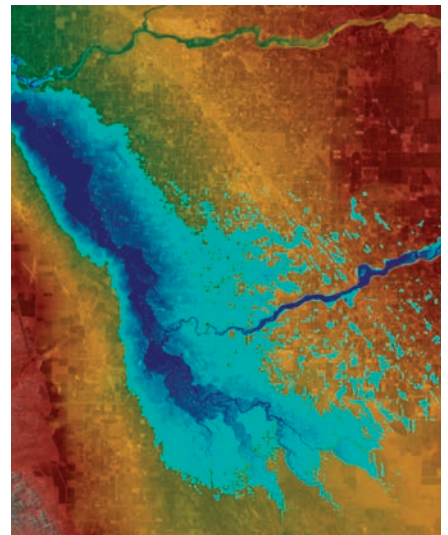
Using the latest software and simulation tools, including comprehensive hydrologic and hydraulic modeling and Geographic Information Systems (GIS) tools, we can help you evaluate potential impacts from dam failure and develop effective preparedness plans.

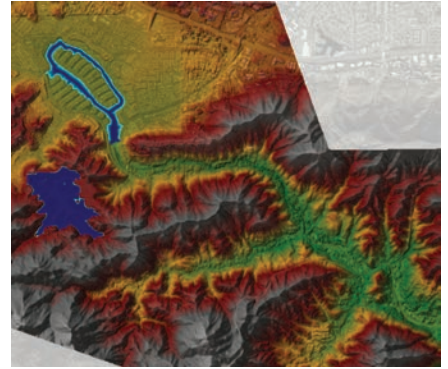
Prepare for the Unexpected

To be well-prepared in case of emergency, clients seek consultants who provide workable, common-sense solutions. With more than 30 years' experience in Emergency Action Planning (EAP), Mead & Hunt has established thorough knowledge of Federal Energy Regulatory Commission (FERC) and State regulations, procedures, requirements and compliance strategies. We can solve complex challenges in all phases of emergency action planning.

New EAPs, EAP updates, and time-sensitive (sudden-failure) EAP analyses lay the groundwork. Tabletop and functional exercises conducted with radio communications and real-time digital simulations test response readiness during a dam failure emergency. The dam owner, regulator(s), local communities and other stakeholders are actively engaged throughout the planning process, so together, we can come up with technically sound and effective plans.

During the past 40 years, our hydrologists have conducted more than 300 dam failure analyses for dams ranging in height from several feet to more than 600 feet. Using the latest software and simulation tools, including comprehensive hydrologic and hydraulic modeling and Geographic Information Systems (GIS) tools, we can help you evaluate potential impacts from dam failure and develop effective preparedness plans.





State-of-the-Art Inundation Mapping

Our GIS-based inundation maps clearly and concisely present necessary information while meeting FERC and State mapping and GIS submittal requirements. GIS databases make it easy to efficiently update EAP maps as changes such as downstream development are encountered over time. These databases also support the development of GIS-based inundation simulations that are used during tabletop and/or functional exercises to provide “real time” visual cues to exercise participants.



EAP Services

- Dam failure analyses
- Inundation mapping
- EAP document preparation
- Tabletop exercises
- Functional exercises
- Sudden failure assessments
- Warning devices and strategies



Dam Failure Analyses

- 1D and 2D hydraulic modeling
- Inundation mapping
- Inflow design flood (IDF) determination
- Hazard potential classification



GIS Services

- Emergency action plan mapping
- Preparation of FERC GIS deliverables
- Real-time visual inundation simulations
- FERC Exhibit G project boundary map GIS deliverables
- FERC recreation plan GIS deliverables