

# Dam Safety

## Full complement of services backed by team with experience and innovative solutions

For more than 50 years, AMEC has engineered and constructed hydroelectric and water supply, flood control and minesite developments worldwide. Projects include dams of all types, ranging in height from 3 m to over 100 m. This extensive background and experience enables the company to offer clients the full spectrum of dam safety services.

AMEC's dam safety services include inspections, investigations, design, installation and interpretation of monitoring equipment, structural analysis, hydrologic studies, hydraulic analysis, flood estimating, dam break and flood inundation mapping, and emergency preparedness and response planning.

### Dam Safety Reviews

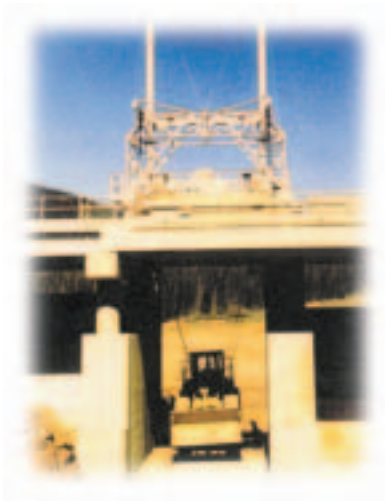
- Classification Hazard
- Site Inspections
- Hydrologic Modeling and Hydraulic Analysis
- Stability Analysis for Static and Dynamic Loadings
- Design and Construction QA/QC
- Operation, Maintenance and Surveillance Plans
- Emergency Preparedness Plans
- Dam Safety Reports



### Inspections and Investigations

- Review of Available Data
- Systematic Site Inspections
- Dam Safety Reviews
- Hazard Classification
- Surveys
- Underwater Surveys and Inspections
- Geotechnical Investigations
- Evaluation of Structural Integrity
- Reconnaissance of River Basins
- Non-destructive Testing





## Hydrologic and Hydraulic Analysis

- River Basin Hydrology, Rainfall, Runoff, Snowmelt
- Basin Simulation Models
- Statistical Flood Analysis
- Probable Maximum Flood Analysis (PMF)
- Selection of Inflow Design Flood (IDF)
- Hydraulic Design of Spillways and Outlet Works
- Dam Break and Flood Inundation Studies
- Freeboard and Wave Action Assessment
- Ice Studies
- Erosion Potential Assessments
- Sedimentation Studies and Modeling

## Geotechnical

- Geotechnical Investigations
- Geological Mapping
- Seismic Evaluation
- Materials Testing and Strength Parameters
- Foundation Stability
- Slope Stability Analysis
- Finite Element Analysis for Seepage, Groundwater Flow, Cracking
- Dewatering/Drawdown Impacts
- Instrumentation and Performance Monitoring
- Earthquake Resistance Design

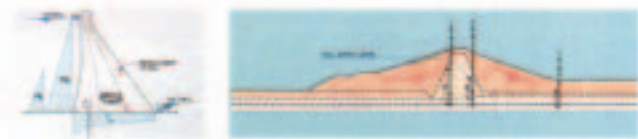


## Structure Evaluation

- Condition of Structures and Sites
- Stability Evaluation
- Structural Design
- Performance Assessments

## Expert Advice

- Preparation of Inspection Guidelines
- Preparation of Procedures for Monitoring and Inspection
- Preparation of Emergency Preparedness Plans
- Design and Construction QA/QC of Repairs and Improvements



For a list of office locations, company contacts and other services refer to:  
[www.amec.com](http://www.amec.com)