



QUANTITATIVE HYDROLOGY AND FLUVIAL GEOMORPHOLOGY

Judicious management and utilization of agricultural lands, riverine corridors, and wetland areas is a complex balancing act between resource development, water allocation, and ecological preservation. The centroid of this balancing act is the volume and energy of water in a watershed. A quantitative understanding of the volume, energy, variability, and behavior of water in a watershed is essential when balancing resource development, water allocation, and ecological preservation.

Cotton, Shires and Associates, Inc., (CSA) is a leading engineering geologic and geotechnical engineering firm in the San Francisco Bay region with personnel dedicated to quantitative hydrology and fluvial geomorphology. Our hydro-geomorphologists approach problems from a watershed perspective and specialize in detailed field characterizations and historic hydrologic analyses. In addition, our hydro-geomorphologists work closely with our geotechnical and hydraulic engineers to develop state of the art solutions to slope stability, bank erosion, and sedimentation problems.

The range of hydro-geomorphic services available from CSA include:

- Topographic Surveying
- Geomorphic and Geologic Mapping
- Sedimentology and Stratigraphic Analyses
- Floodplain Delineation and Channel Migration Analyses
- Wetlands Delineation
- Groundwater Investigation and Analysis
- Stream Gaging and Discharge Measurements
- Sediment Sampling and Sediment Transport Investigations
- Laboratory Analysis of Sediment
- Analysis of Stream Gaging Station Records
- Computer-Assisted Stream Flow Modeling
- Hydrologic Data Compilation and Historic Analyses

