

# Joseph S.C. Bonadiman, PhD, P.E.

Chairman & C.E.O.

## Education

*Los Angeles Pierce College, A.S.  
California State University  
Fresno, B.S. Civil Engineering  
Century University, M.S. Civil  
Engineering  
Columbus University, PhD, Civil  
Engineering*

## Registrations

*Registered Civil Engineer  
California No. C-30238  
Registered Civil Engineer  
Nevada No. C-5671  
Registered Civil Engineer  
Colorado No. C-16973*

## Affiliations

*Fellow, American Society of  
Civil Engineers  
Fellow, National Academy of  
Forensic Engineers  
Member, American Water  
Works Association  
Member, National Society of  
Professional Engineers*

## Experience

*40 Years*

Mr. Bonadiman has designed and managed most types of Civil Engineering projects. He served as guest lecturer on engineering subjects for the University of California covering such issues as design of utilities, ecological systems, energy systems, and computer aided design and drafting facilities.

In addition, Mr. Bonadiman has been responsible for studies, designs, management, and investigations of most types of hydrology and hydrology related matters. His activities have included working with city, county state and federal agencies on items ranging in complexity from technical studies to failure investigations, expert testimony, engineering design, inspection, and finally, construction management. Selected project experience includes:

- Design Engineer on hydrology study and design of 2% miles of an 11' x 10' box culvert for the City of San Bernardino. Project paid for through a United States government grant. Because this box culvert ran through the main part of the City, a study had to be completed for a significant portion of the City prior to the design of the storm facility.

- Design Engineer on 3,000 feet of a 10' x 9' box culvert for the National Orange Show in the City of San Bernardino. A total of 6,000 feet of culvert was designed and 3,000 feet have been built to date. The construction of the box culvert allowed for improved parking and easier access to the National Orange Show property in addition to solving their drainage problem.

- Staff Engineer on a hydrology analysis, study and design for a

compacted soil cement levee for the County of Ventura. The Arroyo Simi Wash carried a Q of 33,000 cfs. Due to the location of the wash, no acceptable rock to line the face of the levee was available and reinforced concrete was not an option. Therefore, an analysis was made as to the most inexpensive way to protect the levee from erosion. Compacted soil cement was recommended and used successfully for the first time in Ventura County's history.

- Design Engineer for a hydrology study and the design of channel protection for a portion of the San Luis Ray River in the County of San Diego. The San Luis Ray River has a Q100 of 46,000 cfs and a design with a back water analysis was necessary to protect properties next to the river.

- Principle Engineer on three miles of 84" diameter storm sewer in the cities of Rialto and Colton California. Design and construction of this line was complicated due to its location in Valley Boulevard that had large crossing utilities.

- Forensic Engineer on several cases having to do with Counties, Cities and Flood Control Districts. Ranging in scope from dam failures to personal injury in connection with Flood Control facilities. Calculations, reports and inspections are required for typical court cases using expert services.

- Design Engineer for a hydrology / hydraulics study and design for 4,000 feet of Reche Canyon Channel. Design was for an 11' deep trapezoidal channel with a 25' bottom width in the City of Colton,



## Joseph S.C. Bonadiman, PhD, P.E.

California. The analysis design and construction was conducted to facilitate the removal of an area from the FIRM Maps by working with FEMA. This was done by utilizing the Army Corps of Engineers' HEC-II computer program and verify the adequacy and HEC-I for the Hydrology Study.

- Design Engineer for a hydrology and hydraulic study for the design of two 48" x 76" reinforced elliptical concrete pipes in the City of Norco. HEC-I and HEC-11 software was incorporated in the analysis to handle retention basin analysis, routing of flood hydrograph, channel design, and dam break analysis. This project was done with the authority of the County of Riverside and the City of Norco. The design consisted of a drainage system, which included upstream diversion of waters as well as flows intercepted by the pipes. The design was complicated by size of the pipes and the relationship to other utilities.

- Staff Engineer working with the Army Corps of Engineers HEC-II software in the hydrology study and design of Rock Slope Protection for a one mile reach of City Creek, located in Highland, California. This project was done under the supervision of the San Bernardino County Flood Control District, Caltrans, and the Army Corps of Engineers to facilitate the design and construction of improvement along City Creek. The Corps of Engineers S.P.F. was a flow of 30,000 cfs. The analysis and design was submitted to FEMA for a Letter of Map Revision (LOMR) and subsequently approved.

- Project Engineer of a hydrology study for Mill Creek using San

Bernardino County Flood Control District synthetic unit hydrograph and rational method. This project consisted of preliminary engineering studies for channel crossing of Mill Creek in the County of San Bernardino. Mill Creek is a major tributary to the Santa Ana River. This project was done for Thousand Trails, a large recreation corporation and the County of San Bernardino.

- Staff Engineer for a drainage study and design of pipes, channels and box culverts for the Meadow Brook Redevelopment Project in the City of San Bernardino. This study and design consisted of the analysis of drainage and design of facilities for a major portion of the downtown section of the City of San Bernardino, and the Redevelopment Agency of the City.

- Staff Engineer for a hydrology study and design for the 11 Mile Strip Regional Park between Parker, Arizona and Parker Dam, in the County of San Bernardino, was submitted by JBA using the San Bernardino County Flood Control District unit hydrograph. This project studied how to protect the County Park and park facilities from drainage tributary to the Colorado River. The project was done for the County of San Bernardino Regional Parks Department and the San Bernardino County Flood Control District.

- Design Engineer for a hydrology study and dam design for Fish Slough, Inyo County. This project was done under the supervision of the State of California and the County of Inyo. Fish Slough was developed into an area for water retention for fishing activities. The original dam conceived by the county was to be at a location that had the highest



## Joseph S.C. Bonadiman, PhD, P.E.

---

seismic activity of any place recorded in the State of California. The design analyzed a series of possibilities and choose a multiple dam design that would minimize the counties liability while maximizing the fishing potential.

- Staff Engineer for a hydrology study for the design of a 45' high 450' long dam for the County of Inyo. This project was done under the State's David Grunsky Act to provide recreational development. The design of the dam was completed weeks prior to the damaging earthquake in Sylmar, which then increased the design criteria for the seismically sensitive projects. The dam had to be redesigned to the new state requirements and resubmitted to dam safety for approval.

- Staff Engineer for a hydrology /hydraulic study and design for Prado Dam Recreational Facilities. The study had to be approved by the State, the County and San Bernardino County Parks and Recreational Department. The Regional Park being designed was in the vicinity of the tributary channels leading into Prado Dam. The design had to analyze the effect on the flows to park properties.

- Project Engineer for a project, located in Desert Hot Springs, California. The project required a compound design of retention basin, trapezoidal channel, transition structures, channel confluence and hydrology/hydraulic study. The design and subsequent construction of the project allowed further development of a large residential development within the City of Desert Hot Springs. The flows had to be captured from three separate areas. The channel and retention basin, included earth slopes, grouted rock

protection and concrete lined channels. The project used the firm's hydrology and hydraulic software, and the firm's proprietary computer aided and design software. Plan checking of the project was partially done by the County of Riverside Flood Control District, who also utilizes the firm's software.

