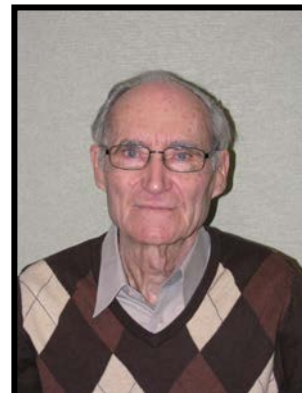


EDUCATION

- ◆ **Stanford University**
BS in Civil Engineering, 1948
MS in Civil Engineering-Hydraulics, 1949
Degree of Engineer (Doctor), Civil Engineering-Hydraulics, 1952



PROFESSIONAL LICENSES and SOCIETIES

- ◆ Registered Civil Engineer in California (8405) and Nevada (3043)
- ◆ Registered Agricultural Engineer in California (Inactive)
- ◆ Fellow, American Society of Civil Engineers
- ◆ Member, Tau Beta Pi, Honorary Engineering Society
- ◆ Board of Directors and President, United States Committee on Irrigation and Drainage Management Board, International Commission on Irrigation and Drainage, New Delhi, India
- ◆ Twelfth USCID Service to the Profession Award – November 2011

EXPERIENCE

Truckee-Carson Rivers:

1975-1990: Initiated studies on Truckee-Carson Rivers on behalf of Truckee Carson Irrigation District and Sierra Pacific Power Company (Truckee Meadows Water Authority) culminating in the 1990 passage by Congress of Public Law 101-618- Negotiated Settlement Act. Studies included developing the hydrologic database adopted by all parties and in cooperation with Sierra Hydrotech developing the Truckee River Operations Model (TROM (MBK)) which was adopted as the technical basis for analyzing the Truckee River Operating Agreement. On Sierra Pacific Power Company team that negotiated the Preliminary Settlement Agreement with the Pyramid Lake Paiute Tribe. This agreement was the basis for the settlement and certain provisions of the agreement were incorporated into the Truckee River Operating Agreement. Represented Sierra Pacific Power Company (TMWA) on technical committees developing the Truckee River Operating Agreement. Testified in Federal District Court, before the Nevada State Engineer, and Nevada Public Service Commission on Truckee River issues.

Consultant to SPPCo and TMWA on water rights and water supply. In 1979, analyzed SPPCo municipal water supply and determined that the water supply was inadequate if there was a repeat of the drought of the 1930s. This finding led SPPCo to negotiate the Preliminary Settlement Agreement, a water rights settlement, between SPPCo and the Pyramid Lake Paiute Tribe. Assisted in developing water resource plans and in presentation of the plans to the Nevada Public Service Commission (Nevada Public Utilities Commission). Analyzed current Truckee River operations and forecasts in coordination with SPPCo operating staff.

1990-date: Participated in negotiations of the Truckee River Operating Agreement which was adopted in September 2008. Serving as a consultant in water right proceedings relative to the implementation of the Truckee River Operating Agreement before the Nevada State Engineer and the California Water Resources Control Board.

Chronology:

- 1992 - Present **MBK Engineers, Sacramento, CA**
Consulting Civil Engineer
Water supply, water rights, hydrology, irrigation, ground water and related issues.
- 1967 - 1991 **Murray, Burns & Kienlen (MBK Engineers), Sacramento, CA**
Principal
Practice predominantly in fields of hydrology, hydraulics, drainage, flood control, water supply, and economics of water resource development. Qualified as expert witness before Superior Courts of the State of California and United States District Court.
- 06/66 - 02/67 **Claims Appeal Board, Office of Chief Engineer, California Department of Water Resources, Sacramento, CA**
Member
Reviewed, investigated, conducted hearings and made recommendation on construction contract claims for State Water Project.
- 1963 - 1966 **Leedshill-DeLeuw Engineers, Dacca, East Pakistan (Bangladesh)**
Chief Engineer
Consultants to East Pakistan Water and Power Development Authority on planning, design, construction, and operation and maintenance of Coastal Embankment Project and Brahmaputra Right Bank Flood Control Project.
- 1961 - 1963 **California Department of Water Resources, Sacramento, CA**
Assistant to Chief Engineer
Assisted Chief Engineer in planning, directing, and supervising technical and engineering activities of the California Department of Water Resources. Designated Acting Chief Engineer when Chief Engineer not available.
- 1952 - 1961 **California Department of Water Resources, Sacramento, CA**
Hydraulic and Water Resource Engineer (to Principal Engineer level)
Conducted planning, hydrologic and hydraulic studies throughout California in the fields of irrigation, drainage, flood control, water supply and watershed analysis. Also operation and maintenance of flood control projects and development of flood and water supply forecast procedures.
- 1949 - 1952 **California Division of Water Resources, San Diego, CA**
Hydraulic Engineer
Investigation of current water use and ultimate water requirements, Coachella, Palo Verde, and Imperial Valleys, California. (Excluding nine months graduate study, Stanford University).

PROFESSIONAL ACTIVITIES

- ◆ **Member, United States Working Committee on Rehabilitation & Modernization of Water Projects for the International Committee on Irrigation & Drainage.**
- ◆ **Chairman, Surface Water Committee, Division of Irrigation and Drainage, American Society of Civil Engineers (1980-81).**
- ◆ **Member, Task Committee on Collection and Publication of Basic Water Resources, Data, Division of Irrigation and Drainage, ASCE.**
- ◆ **President, Sacramento Section American Society of Civil Engineers (1973); Officer and Board of Directors for 15 years; Secretary, Treasurer, Chairman of Professional Objectives, Professional Conduct, Finance, Program, Legislative Affairs, & Society Affairs Committees.**
- ◆ **Member, Dean's Policy Advisory Committee, University of California at Davis, College of Agriculture and Environmental Science (1980-82).**
- ◆ **Member, Industrial Advisory Board - School of Engineering and Computer Science, California State University, Sacramento.**
- ◆ **Instructor, Hydrology for Engineers, University of California Extension Service.**
- ◆ **Member, Association of California Water Agencies.**
- ◆ **Member, Western Snow Conference.**
- ◆ **Member, Nevada Water Resources Association.**

REPRESENTATIVE SERVICES

1. **Developed historic Lake Tahoe water surface elevations assuming outlet at Lake Tahoe in its natural condition (Fogerty et. al. vs State of California et. al., County of Placer No. 48281).**
2. **Developed historic Clear Lake water surface elevations assuming outlet at Clear Lake in its natural condition (County of Lake et. al. vs M. Maroni Smith et. al., County of Lake No. 17806).**
3. **Developed historic natural flows for the American River for California State Lands Commission.**
4. **Developed historic natural flows for the San Joaquin River and defined water surface elevations for historic conditions from Friant Dam to US Highway 99 for California State Lands Commission.**
5. **Consultant and expert witness on levee failures and flooding on Sacramento, Feather, Yuba and San Joaquin Rivers and Sacramento-San Joaquin River Delta. Studies involved**

analyzing historical events and developing impacts of historical floods absent development of levee systems or upstream reservoirs.

6. Conducted hydrologic and hydraulic studies and prepared a flood control master plan for Tulare County (1971).
7. Provide water supply forecasts to water users and districts for the Kings, Kaweah, Tule, and Kern Rivers. Analyze runoff from these basins for the districts. Work coordinated through the Watermasters on each of the rivers.
8. San Joaquin River Flood Control Association. Worked with U. S. Corps of Engineers, California Department of Water Resources, and local districts to improve reservoir operation criteria to develop most efficient operation for San Joaquin Valley.
9. Conducted hydrologic analyses and developed concept and plans for the Lower San Joaquin Flood Control Project. Project subsequently constructed by the State of California. Project consists of over 400 miles of levees on San Joaquin River and bypass channels from confluence of San Joaquin River with Merced River upstream to above the City of Mendota.
10. Represent Corcoran Irrigation District on development and management of designated floodway by State Reclamation Board on Kaweah River System.
11. Consultant to Tulare Lake Basin Water Districts. Coordinate flood operation of upstream reservoirs and downstream flood control projects on the San Joaquin River and Tulare Lake Basin streams during high runoff periods.
12. Responsible for investigation of Cross Delta Facilities concept for State Water Project in San Francisco Bay and Delta Investigation (Biemond Plan).
13. Consultant to United States on hydraulic characteristics of the Yuba River. (State of California vs. Yuba Goldfields)

ENGINEERING PAPERS, ARTICLES, AND PUBLICATIONS

- ◆ "Small Scale Topographic Effects on Precipitation Distribution, San Dimas Experimental Forest: Presented 1952 at Annual Meeting of the American Geophysical Union, Washington, D.C.", Published in Transactions AGU - 1953
- ◆ "Effects of Floods on Agriculture: Presented at ASCE Hydraulic Division Meeting", University of Wisconsin, 1956
- ◆ "Graphical Forecast Errors" (Co-Author). Published in Proceedings of Western Snow Conference, 1957
- ◆ "Hydrology and Flood Control Features of Oroville Dam" Presented at National Conference of American Society of Civil Engineers, Reno, Nevada, 1960; Published in ASCE Transactions 1961

- ◆ **"Coordinated Flood Operations in California" Presented at ASCE Hydraulic Division Meeting, University of Illinois, 1961**
- ◆ **"Development of Deltaic Areas - East Pakistan" Prepared for Chief Engineering Advisor, Government of Pakistan. Published in Proceedings International Commission on Irrigation and Drainage, New Delhi, India, 1965**
- ◆ **"Coastal Embankment Project - East Pakistan" Published in ASCE Waterways and Harbors Division Journal 1967**
- ◆ **"The Cooperator's Use of Basic Data and Forecast" Presented at Fifteenth Annual Meeting, California Cooperative Snow Survey Program, 1968**
- ◆ **"Flood Control Master Plan for the County of Tulare", 1971**
- ◆ **"Retention of Riparian Vegetation, Sacramento River, Tisdale Weir to Hamilton City", 1978**
- ◆ **"Sierra Pacific Power Company, 1985-2005 Water Resources Plan", 1985**
- ◆ **"Water Resource Plan - 1988-2008, Westpac Utilities, a Division of Sierra Pacific Power Company", 1989 (co-author).**
- ◆ **"Impacts of the Safe Drinking Water Act, Treatment Plant Requirements, and the Proposed Chalk Bluff Treatment Plant", Sierra Pacific Power Company, March 1991**
- ◆ **"Surface Water Treatment Rule Compliance Plan", Sierra Pacific Power Company, August 1991**
- ◆ **"UEPA Document for the Chalk Bluff Water Treatment Plant", Sierra Pacific Power Company, May 1991**
- ◆ **"UEPA Document - Raw Water Supply for the Chalk Bluff Treatment Plant", Sierra Pacific Power Company, December 1991**
- ◆ **Editor – "Proceedings from the USCID 14th Technical Conference on Irrigation, Drainage and Flood Control," Phoenix, Arizona, June 1998.**
- ◆ **"Verification - Based Planning for Modernizing Irrigation Systems" (J. Burns, G. Davids, A. Dimmitt, J. Keller, 2000 USCID International Conference, Fort Collins, Colorado, June 2000.**