

Mike Day, PE

Principal Engineer

Mike Day is a principal project manager in water and energy resources engineering with over 30 years of experience. He has an extensive background in investigations, planning, and design of irrigation and drainage facilities for farms and water agencies. Mr. Day's areas of expertise include on-farm irrigation and drainage system design and evaluation, groundwater and surface water investigations, groundwater recharge and groundwater banking facility design, district surface and subsurface drainage systems design, and design of large water conveyance and storage facilities.

Education

B.S. Civil Engineering with concentration in hydraulics, hydrology, and water quality, California State University, Fresno

Registration

Civil Engineer, California #39494

Affiliations

United States Committee on Irrigation and Drainage (USCID); Kern Chapter of American Council of Engineering Companies (ACEC)

Relevant Experience

Drainage watershed mapping and water quality investigations, Central California Irrigation District, Los Banos, California – Mr. Day led District efforts to map watersheds in several areas of the District with respect to tailwater and subsurface drainage water collection conveyance, and reuse. He also designed water quality sampling and water quality data management programs for the District's irrigation and drainage canals.

Irrigation Evaluations, Westlands Water District, Mendota, California – Mr. Day monitored applied irrigation water and conducted periodic irrigation efficiency evaluations on several fields in the district over a two year period as part of a program to improve irrigation efficiency, reduce shallow groundwater levels and drainage problems. Most of the fields were furrow irrigated, while some were irrigated by sprinklers or border/checks. Continuous monitoring of irrigation and tailwater flows was performed.

Study of Innovative Methods to Reduce Drainage Volumes from West Side Districts, Firebaugh, California – Mr. Day conceived and directed in-field studies for the United States Bureau of Reclamation in four fields in different districts near Firebaugh that contributed surface and subsurface drainage water to the San Joaquin River. DOS-IRR valves were installed in subsurface drains and operated to reduce drainage volumes as well as salt, Boron, and Selenium loads. Irrigation water, tailwater, and subsurface drainage flows and quality were continuously monitored during the course of three years to review the feasibility of the use of DOS-IRR valves for west side drainage reduction and water quality improvement in receiving waters.

Drip System Design and Construction Review, Airway Farms, Huron, California – Mr. Day was project manager and lead construction reviewer in the design and construction of drip systems for several 160 acre blocks of land previously irrigated by furrows.

UCWSREC, Five Points, California, Chief Designer/Project Manager – Mr. Day was chief designer for this project which consisted of upgrading the existing irrigation distribution system on the University of California's Westside Research and Extension Center. The existing concrete pipeline system supplying surface irrigation water was replaced with PVC pipelines. In addition, a new pressurized PVC pipe distribution system with a booster pump station was constructed to supply sprinkler and micro-irrigation systems on the research plots.

River Area Pump Station and Pipeline Project, Kern Water Bank Authority, Bakersfield, California – Mr. Day was responsible principal for design, bidding assistance, and construction management of a three mile long 60-inch diameter profile-wall HDPE pipeline with pump station (dual 50 cfs pumps), connections to well pipelines, three turnouts to recharge ponds, and a connection to the Cross Valley Canal with associated gates and water control structures.

Lost Hills Water District Water Conservation Projects, Lost Hills Water District, Lost Hills, California – Mr. Day served as the responsible principal to obtain funding for, design, and manage construction of several projects to eliminate over 90 percent of canal seepage losses in the district's canals by concrete and geo-membrane lining.

South Island Canal Project, Laguna Irrigation District, Lemoore, California – Mr. Day oversaw the preparation of plans and specifications, competitive bidding, and construction of a project to replace a 2.5 mile portion of the district's South Island Canal. The project included construction of a regulation and recharge reservoir.

Lateral 3-1S Canal Project, Dudley Ridge Water District, Lost Hills, California, Chief Designer/Project Manager/Construction Manager – Mr. Day was project manager and chief designer of a project to design and construct a new 2.5 mile long 40 cfs canal lateral to serve lands previously served through a different canal system. The project included new concrete lined canal with check/drop structures, overshot gates, turnout structures, road crossings, and a $\frac{3}{4}$ mile long earthen spill re-capture canal.

Groundwater Evaluation, Tulare 144 Ranch, Tulare, California – Analyzed quantity and quality of groundwater supply available to 1,800 acre farm in Tulare County and projected the impact of increased future pumpage on groundwater levels and quantity.

Water Quality Exchange Study, Friant Water Users Authority, Southeastern San Joaquin Valley, California, Lead Researcher/Writer for Case Studies – Mr. Day led a research and writing team in the investigation of soil and groundwater impacts resulting in three water agencies (two agricultural and one urban) which have utilized State Water Project (California Aqueduct) water in-lieu of Central Valley Project Friant Unit (San Joaquin River) water as a result of water transfer and exchange programs for over 30 years. A report was prepared to summarize observed water, soil, and groundwater impacts, impacts to urban water treatment and distribution systems, agricultural water distribution and irrigation systems, and to estimate changes in applied salts through irrigation water quality and cultural practice (soil amendment) practices.